HOSPITAL AND MEDICAL FACILITIES SERIES
(Under the Hill-Burton Program)


# Elements of Progressive Patient Care

U.S. DEPARTMENT OF HEALTH, EDUCATION, AND WELFARE
Public Health Service • Division of Hospital and Medical Facilities
Washington 25, D.C.

This is a revision of material
published under the same title
as a tentative draft in 1959.

Public Health Service Publication No. 930–C–1

September 1962

For sale by the Superintendent of Documents, U.S. Government Printing Office
Washington 25, D.C. - Price 45 cents

# Foreword

This publication is a revision of "Elements of Progressive Patient Care" issued as a tentative document in 1959. Presented in a new format, certain information discussed earlier has been enlarged upon and new material arising from additional experience in the field has also been included.

Although the progressive patient care concept, in its present form, has been in existence for less than a decade, it has attracted the attention of hospital planners not only in the United States but also in many foreign countries. Hundreds of hospitals have successfully adapted one or more aspects of this new approach to patient care, thereby becoming enthusiastic proponents of the concept.

Despite this widespread endorsement, however, progressive patient care should not be considered the solution to all hospital problems. Rather, it is one method which shows great promise for alleviating many shortcomings experienced in the traditional hospital arrangement of services. Hospitals, therefore, should be encouraged to continue looking for improved methods of organizing hospital services—whether in connection with the progressive patient care concept or some entirely new approach to hospital organization.

The elements of progressive patient care cited elsewhere in this report are not to be considered as "frozen"—unamenable to variation. On the contrary, each hospital should consider the concept in light of its own needs. Only those provisions of the program most suited for the setup of the individual institution should be adopted. Nevertheless, we feel that the fundamental principles of the program as described in chapter II are universally applicable.

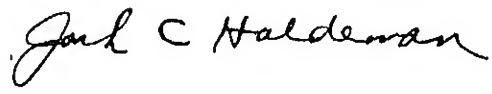
New material in this report includes findings of several Public Health Service studies of progressive patient care dealing with such subjects as nurse staffing patterns, estimating bed needs, architectural design and equipment requirements, and changes in dietary practices. A variety of other sources were also used, including the following:

- Detailed observation since 1957 of the transition of a hospital from an institution with traditionally organized services to a hospital with four inhospital aspects of progressive patient care (intensive care, intermediate care, long-term care, and self-care);
- Visits to dozens of hospitals with one or more elements of progressive patient care; and
- Correspondence and conferences with many leaders in the hospital field who have had experience with certain aspects of the program.

In essence, this publication represents a pooling of the professional judgment as to the most desirable approach to progressive patient care in the light of our present knowledge. At the same time, it is fully recognized that the additional studies now underway may uncover further refinements to the program. Some of these include (1) the differing organizational patterns occurring in teaching hospitals, full-time staff hospitals, and

departmentalized hospitals; (2) patient acceptance of the PPC pattern of care; (3) the quality of service rendered in a PPC hospital to patients with specific clinical conditions; and (4) the procedures to be followed for orienting staff, employees, patients, and visitors to a PPC hospital.

It is our hope that this publication will offer useful suggestions to hospital managements seeking guidelines for developing progressive patient care in their institutions.



JACK C. HALDEMAN, M.D.,
*Assistant Surgeon General,*
*Chief, Division of Hospital and Medical Facilities.*

# Contents

# FIGURES

# Acknowledgments

Grateful acknowledgment is made to the many individuals whose combined efforts have made this publication possible.

The basic study on progressive patient care was conducted at the Manchester (Conn.) Memorial Hospital by a committee of consultants consisting of persons from the Public Health Service and from various organizations and hospitals. This study committee met at monthly intervals in 2-day sessions at Manchester for almost a year.

After the basic study was completed, additional studies by individual committee members were conducted at Manchester and at several other institutions with and without progressive patient care programs.

Members of this original study committee follow:

**Medical Practices**

BURNET M. DAVIS, M.D.[1]
LANE GIDDINGS, M.D.[2]
JACK C. HALDEMAN, M.D., M.P.H.[1]
HOWARD J. LOCKWARD, M.D.[3]
EDWARD T. THOMPSON, M.D., F.A.C.H.A.[1]

**Nursing Practices**

FAYE G. ABDELLAH, R.N., ED. D.[1]
M. VERA DORMER, R.N.[2]
HELEN ROBERTS, R.N.[1]
E. JOSEPHINE STRACHAN, R.N., M.N.[4]

**Dietary Practices**

ANNE CLAIRE DONOVAN, B.S., A.D.A.[1]

**Architectural Planning**

AUGUST HOENACK, A.I.A.[1]
GEORGE IVANICK, A.I.A.[1]
O. B. IVES [1]

**Social Science**

EDITH D. LENTZ HAMILTON, Ph. D.
University of Minnesota
Minneapolis, Minn.

**Biostatistics**

EUGENE LEVINE, Ph. D.[1]

**Equipment**

ALEXANDER M. MILNE [1]

**Hospital Management**

LOUIS BLOCK, DR. P.H.[4]
DONALD A. KNOWLES [1]
EDWARD J. THOMS, M.A.C.H.A.[2]

**Medical Records**

ADALINE C. HAYDEN, C.R.L.
Medical Records Consultant
Shriners Hospital for Crippled Children
Chicago, Ill.

**Operations Research**

CHARLES D. FLAGLE, D. ENG.
Director, Operations Research
Johns Hopkins Hospital
Baltimore, Md.

**Analytical Statistician**

BURTON MEYER, Ph. D.[4]

**Costs**

BERNARD FELTON, C.P.A.
Connecticut Hospital Association
New Haven, Conn.

The Long-Term Illness Program of the Division of Chronic Diseases assisted in the revision of the portion relating to home care (chapter III, part V). Others who contributed to the development of this report include: Dr. John R. McGibony, Chief of Intramural Research; Charles Wagner, architect; and Miss Gruine Robinson, technical writer; all of the Division of Hospital and Medical Facilities, Public Health Service.

[1] Public Health Service. [2] Formerly with Manchester (Conn.) Memorial Hospital.
[3] Manchester (Conn.) Memorial Hospital. [4] Formerly with Public Health Service.

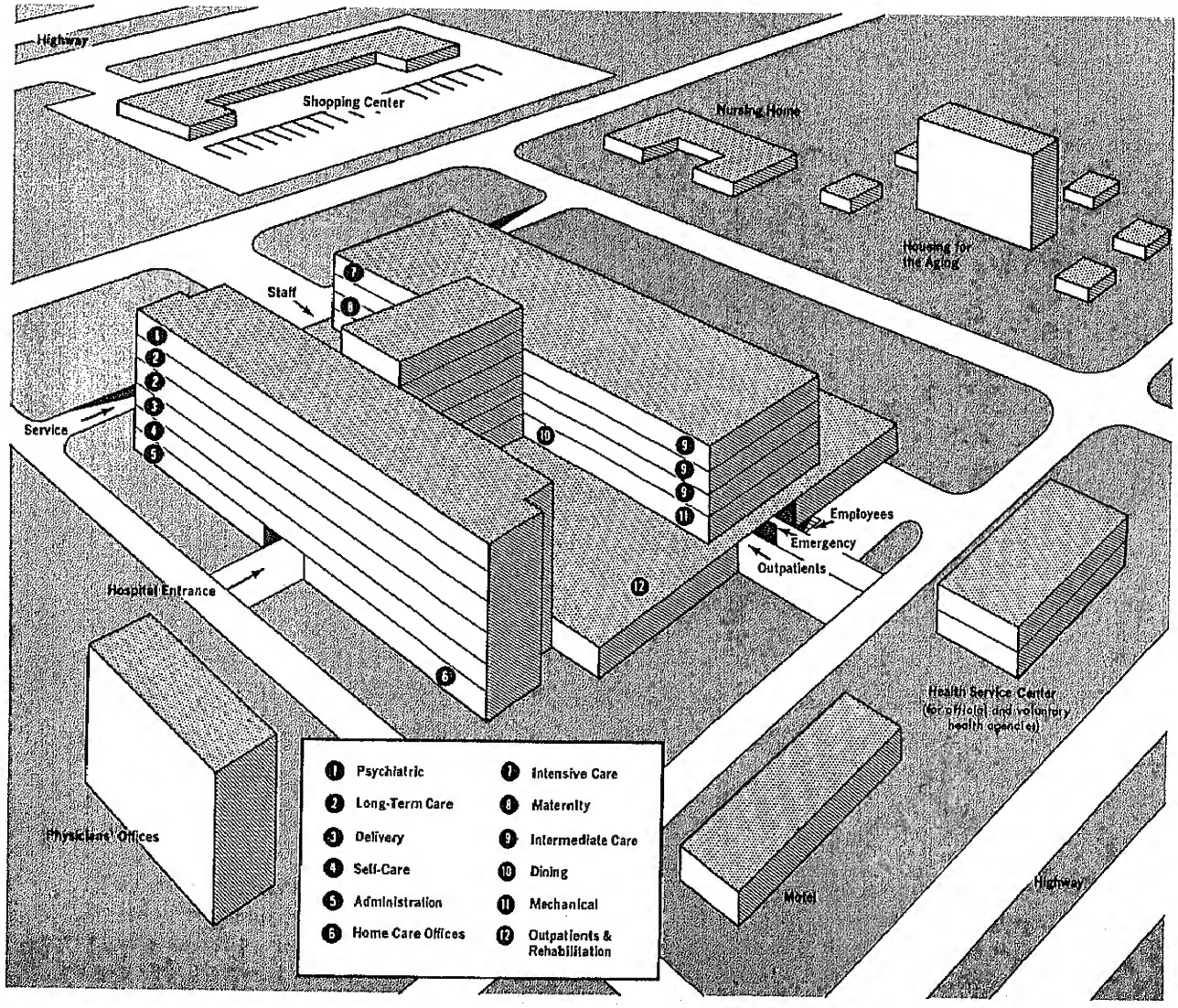



*Figure 1.* The regional medical center should provide a wide spectrum of services and facilities for both the inpatient and outpatient.

# Chapter I—THE CONCEPT

Two phrases are commonly used to describe progressive patient care: "the tailoring of hospital services to meet the patient's needs" and "the right patient, in the right bed, with the right services, at the right time."

These two statements express the salient features of progressive patient care. The principal objective of this growing concept is to provide better treatment and care by organizing hospital services around the individual patient's medical and nursing needs. Specially planned and organized units are set up to which patients are assigned in accordance with their degree of illness and need for care. Many factors must be considered. For example, nurses and other personnel are selected for their ability to provide the kinds of services needed by each group of patients. Organizational patterns and policies must be developed to facilitate the smooth operation of the program. Various physical facilities within the hospital must also be adapted to conform with the program needs.

## Application to Communitywide Planning

Progressive patient care not only has important implications for individual hospitals, but, in its broadest sense, encourages the development of a coordinated pattern of services and facilities on a communitywide basis. The concept has special application to what has evolved as one of the ultimate goals of areawide health facility planning—the establishment on a common site of a regional medical center which would offer a wide spectrum of services and facilities for both the inpatient as well as outpatient. As shown in figure 1, this medical center would include a hospital offering varying levels of care, a nursing home, housing for the aged, a health service center containing offices for both official and voluntary health agencies, a building for physician's offices, and a motel for ambulatory patients as well as visitors of inpatients. It should also be feasible to have a shopping center nearby.

The development of such centers would result in better utilization of scarce professional and technical personnel, and would permit a more flexible use of facilities as medical advances result in changes in the character of the institutionalized population. This center would serve as the focal point for community health services. In many respects the emphasis of the regional medical center would differ from that of today's conventional general hospital. For example, the hospital center would become

- as interested in caring for the ambulatory patient as it is now with caring for the bed patient;
- as concerned with caring for the long-term patient (including the mentally ill and tuberculous) as it is now with caring for the short-term patient;
- as readily available for assisting the physician with caring for the patient at home, as it is now with assisting him in caring for the patient in the hospital;

654119 O—62——2

♦ as interested in providing continuity of care for patients in paramedical institutions as it is now with providing continuity of care for patients within the walls of its own buildings; and

♦ as dedicated to providing preventive services and teaching health care as it is now in treating the ill.

## The Elements

Progressive patient care is a dynamic concept with application to hospitals of all sizes and types. Although certain fundamental principles should be observed by all hospitals contemplating the adoption of such a program, individual variations can be expected among different hospitals.

At least six elements are incorporated in the progressive patient care concept. These include: intensive care, intermediate care, self-care, long-term care, home care, and outpatient care. With the exception of the latter, these elements are explained in detail in chapter III. The essentials of each may be considered as follows:

*Intensive care.*—For critically and seriously ill patients who are unable to communicate their needs or who require extensive nursing care and observation. These patients are under close observation of nurses who have been selected because of their special skills, training, and experience. All necessary lifesaving emergency equipment, drugs, and supplies are immediately available.

Surgical postoperative recovery room services logically fall within this general category. Detailed exploration of this subject area, however, is omitted from this publication since it is a well-defined and developed concept, discrete and organizationally independent of general nursing services and medical care. For purposes of this discussion, therefore, it is considered as a separate entity.

*Intermediate care.*—For patients requiring a moderate amount of nursing care. Some of these patients may be ambulatory for short periods of time. Emergency care and frequent observation are rarely needed. Included in this group are those patients who are beginning to participate in caring for themselves. In addition, the terminally ill may be cared for here.

*Self-care.*—For ambulatory and physically self-sufficient patients requiring therapeutic or diagnostic services, or who may be convalescing. In this homelike atmosphere, provision is made for relaxation and recreation. Here the patient is instructed in self-care within the limits of his illness.

*Long-term care.*—For patients requiring skilled prolonged medical and nursing care. Rehabilitation, occupational therapy, and physical therapy services may be needed for these patients. In addition, emphasis is placed on instructing those patients who must learn to adjust to their illness and disability.

*Home care.*—For patients who can be adequately cared for in the home through the extension of certain hospital services. A hospital-based home care program provides personnel and equipment from the hospital or through community agencies, such as the local health department or the Visiting Nurse Association. The hospital, however, usually assumes responsibility for coordinating the services, whether they are furnished by the hospital or another agency.

*Outpatient care.*—For ambulatory patients requiring diagnostic, curative, preventive, and rehabilitative services. This element is not described in detail in subsequent sections since it is historically a more generally accepted activity of the average hospital. Also, it usually functions on a more discrete organizational basis and its utilization varies with local circumstances, including patterns of medical practice. This element, however, is included in the architectural drawings presented in chapter III, part VI.

Hospital beds are not always available in sufficient numbers, nor are they indicated for all who need diagnostic and therapeutic services. Adequate care in well-organized outpatient departments fills the need in considerable measure. The number of such units increased in 5 years, 1956–60, from 34 units per million population to 42.7 units per million. In 1948, approximately 43,450,000 outpatient visits were reported by hospitals; by 1961 this figure had practically doubled.

Such trends constitute a potent force in quality, economics, and patterns of medical care. Proper evaluation of such trends and services and logical guidance toward desirable organization and clinical care pose a major challenge to medical staffs and administration alike.

## History of Progressive Patient Care

Although progressive patient care with its present refinements has been described as a radical change in hospital procedure, the basic philosophy of this concept is not new. The classification of patients according to their needs has been carried out by the Japanese

for centuries, and more than 100 years ago in England, Miss Florence Nightingale, in a sense, practiced progressive patient care in her operation of open wards. It was her plan to place the sickest patients at the head of the ward nearest the nurse's desk, while the convalescent or least ill patients were placed in rear beds.

In the United States the concentration of critically ill and self-care patients in separate areas has been the practice of armed service hospitals, tuberculosis hospitals, psychiatric institutions, and some private hospitals since early in this century. Nevertheless, in spite of the many lessons which might have been learned from these sources, few attempts were made to follow an organizational plan of this type prior to the development of the current progressive patient care concept.

The exact date that progressive patient care emerged into its present form is open to question. It is generally agreed, however, that the concept began to take shape in several hospitals in the early 1950's—several years before it was given the name "progressive patient care" in 1956.

During this period, the Department of Health, Education, and Welfare began to place special emphasis on the need to study and develop methods of adapting hospital facilities and services more closely to the varying needs of patients. In September 1956, a Government advisory committee was appointed to survey the problem areas and make recommendations applicable for new hospitals as well as existing facilities.

A year later a Public Health Service team was assigned by the Division of Hospital and Medical Facilities to observe in some detail the transition of Manchester (Conn.) Memorial Hospital from a facility with traditionally organized services to one which had adopted progressive patient care. Since that time many additional studies covering various phases of the concept have been underway at that hospital as well as other such institutions around the Nation.

## Benefits of PPC

Hospitals which are successfully practicing progressive patient care report that the benefits are manifold. They extend to the patient, the physician, the nurse, and those involved in the hospital's operation. Some of the primary advantages for each include:

♦ *The patient* receives the specialized attention he needs when he needs it. Moreover, he is assisted in making his adjustment first to the hospital atmosphere and later to his return to the home and community.

Some of the hospital's objectives are to provide the following: lifesaving care within seconds; constant nursing care when needed the most; high-quality care regardless of economic status; total (physical, teaching, emotional, rehabilitative) services when needed; and nursing care which is planned around progress toward recovery.

The need to prepare the patient to adjust from the hospital to the home or community is an important consideration. The transfer of the patient to the self-care unit prior to discharge minimizes the problem as the patient has the opportunity to adjust gradually from complete dependency to self-sufficiency.

♦ *The physician* is given greater assurance that his patient is receiving a high quality of nursing care, and that the special drugs, medications, and equipment necessary for diagnosis and treatment are in the immediate vicinity of the patient. Moreover, there is greater likelihood that a bed will be available and that trained personnel will be on duty who will contact the physician immediately in emergencies and carry out procedures as required. Emergency orders may be carried out without upsetting the entire routine as the personnel are geared mentally and physically to cope with these problems.

Since early involvement of the physician in setting up PPC is essential, he is made more aware of the hospital's problems and policies. This creates better understanding and promotes better clinical services, team action, and administration.

The physician also figures prominently in the hospital's inservice training program. He is called upon to express opinions on his particular specialty, on general policies, or on some innovation in patient care which he feels would be helpful to hospital personnel. In addition, he will have an opportunity to further his own knowledge by participating in discussions with other staff members.

♦ *The nurse* makes effective use of her special capabilities, and the nursing department is less harassed by problems of providing coverage for critically ill patients in widely separated areas. Progressive patient care permits the assignment of nurses to the area where their individual skills can best meet the needs of the patient. Nurses have more time to spend with patients on nursing, and, as contributing members of

a health team, are able to help patients and families solve their health problems.

The conventional nursing unit usually separates patients by type of service, age or sex, and the patient often remains on the same unit during the various stages of his illness. His likelihood of receiving complete physical care when he needs it the most is decreased. When he makes some progress and is ready for instruction, emotional support, and rehabilitation, the demands of other critically ill patients must be given priority. The patient often is left with the feeling of being neglected, and his progress toward full recovery may be retarded.*

Progressive patient care, through the organization of services and skills based on the needs of patients, can help to make comprehensive specialized nursing care available to patients during different stages of illness. Since nursing supervisors, head nurses, and team leaders work closely together in planning for total patient care, coordination of patient care emerges as a major responsibility of the professional nurse. Moreover, the nurse has an opportunity to utilize her competencies more effectively and thereby acquire greater job satisfaction.

The nursing staff also benefits from the inservice training program which, ideally, is an important part of a progressive patient care program. Nurse staff education in such a program needs to focus on meeting the needs of patients and helping them to solve their health problems.

♦ *The hospital* has an opportunity for enhancing the quality of patient care as a result of effective and efficient use of personnel, beds, physical facilities, equipment, supplies, and funds. Better utilization of better trained personnel means not only better patient care but less personnel turnover, a hidden and costly factor in hospital operation. More effective utilization of existing beds can help reduce capital outlay for new construction. All of these factors add up to better administration and an improved "public image" of the hospital in the community which supports the institution.

Through home care, a hospital becomes more acutely aware of services rendered by other community health facilities. Since the concept extends beyond the walls of a hospital, an important link is formed with other health groups and agencies. This should be beneficial to all concerned and, hopefully, may lead to greater cooperation by all agencies and facilities providing health care.

*F. G. Abdellah and E. Levine, "Effect of Nurse Staffing Patterns on Satisfaction with Nursing Care," Chicago, American Hospital Association, Monograph No. 4, 1959.

## Additional Questions

Despite the many advantages just cited, the hospital official will have many questions to resolve before deciding how progressive patient care will benefit his particular institution and community. The fundamentals to be considered before embarking on such a program are discussed in chapter II. Additional questions worthy of consideration are presented below.

### *Can the progressive patient care concept be successfully adapted to small hospitals?*

A number of small hospitals have reported their success in setting up one or more elements. At a meeting of hospital administrators held in Tucson, Ariz., in March 1960, it was agreed that hospitals of all sizes could benefit. Since hospitals vary in their size, structure, management, and operation, each must decide how best to adapt the concept in accordance with its own needs and policies. Most small PPC hospitals advise introducing only one or two elements at the outset. In some instances hospitals which may not find it feasible to have a self-care unit may prefer that patients so classified be given special privileges such as having their meals at the cafeteria.

### *How are hospital operating costs affected?*

The effect of progressive patient care on hospital costs is a frequently debated topic. The question is not answered merely by comparing charges to patients on a self-care unit with charges for care in a conventional hospital unit. Before a definitive answer can be given to this question, studies will need to be designed that will control as many of the numerous variables as possible. One of the most important and difficult to control is the variation in quality of care, since, in a reorganization of services, there is usually an effort to improve quality. It may be sufficient to recognize that costs are affected by progressive patient care, but that the overriding consideration is its potential for improving quality of care and for efficiency in the use of scarce personnel.

In considering the effect of this method of hospital organization on cost, it is necessary to define the aspect of cost referred to. Is it the total cost to the public for hospital services, or the total cost per patient-day of operating a particular hospital, or the charges to

the individual patient for care on each of the units of the hospital? If hospital services are extended into the home, enabling patients to be sent home earlier from the hospital, what part of the cost of home care is a "hospital cost" for comparative purposes?

The cost of providing services to critically ill patients in the intensive care unit of the general hospital will be greater than that for the care of the average patient in the hospital organized along traditional lines. True, the cost will be less than that which would have been required for around-the-clock private duty nursing services, but critically ill patients today do not routinely receive such services, and when they do, the cost of this service may not be reflected in the hospital cost accounting.

The per diem cost to the patient in the self-care unit will be less than that in the hospital organized along traditional lines, but this potential saving may be offset by a longer patient stay. The latter should reduce the number of "partial cures" and thus diminish the likelihood of readmission of discharged patients back into the hospital. The achievement of this goal may reduce the cost of hospital care to the community, but it will not reduce the cost per patient-day in the hospital. Indeed, if the effect were sufficient to lower hospital occupancy, the cost per patient-day would be increased.

The per diem cost to the patient in a long-term care unit should also be less than the per diem cost in the general hospital unit. However, the country as a whole has an acute shortage of suitable facilities for the care of the long-term patient, and many patients now housed in substandard nursing home facilities, or even committed to State mental institutions, could utilize such facilities if they were available. Although the quality of the services provided these patients would be improved, the overall costs for their care would be increased.

There is sufficient evidence already at hand to show that a comprehensive home care program can reduce the hospitalization costs for selected patients. However, the total costs for the provision of the care may not be reduced, since the home care is usually extended over a much longer period of time than is hospitalization.

Caring for the mentally ill in the community will certainly reduce costs of hospitalization in large State mental institutions, but this saving must be considered in the light of the increased costs in the community hospital, its outpatient department, and the home care programs accompanying the return of such patients to the community.

Should progressive patient care hospitals charge patients different rates on each unit, related to actual cost? Or should the charge be based on the average for the entire hospital? The former principle is more equitable in relating charges to services actually rendered, while the latter principle would tend to "spread the risk" of cost of illness. Where a large portion of the population of a community is covered by insurance, it would make little difference to the individual patient, provided the range of charges did not exceed the insurance allowances. In practice, the local variations in Blue Cross and other insurance coverage may have an important influence on how hospitals set their charges. Insurance practices may also affect the willingness of hospitals to establish long-term care and self-care units. Special attention must be given to hospital cost accounting if charges on each unit are to be based on actual cost of the unit.

### *What are the optimum and minimum nurse staffing patterns for each of the progressive patient care units?*

The findings of a Public Health Service study of non-Federal general hospitals which have introduced progressive patient care would indicate that a single nurse staffing pattern representative of all hospitals does not exist.* Instead, many different patterns have been established, each of which may be characteristic of the particular institution.

The study lists these possible reasons for nurse staffing variability in the intensive care units: (1) the utilization of nonprofessional nurses, (2) the size of the facility, (3) the type of patient, and (4) the layout of the facility.

The study emphasized the need for individual institutions to study its own requirements and plan accordingly. (See chapter III for further discussion of staffing patterns.)

### *What is the effect on medical and nursing education?*

A number of university teaching hospitals throughout the country have successfully adopted the progressive patient care concept. The manner in which the program is carried out is not identical for all hospitals. Some institutions have adopted the approach described in this publication—that is, separating patients according to the intensity of illness rather than clinical service. On the other hand, there are some large hospitals which continue

* F. G. Abdellah, Burton Meyer, Helen Roberts: "Nursing Patterns Vary in Progressive Care." The Modern Hospital, 95: 85-91. August 1960.

to assign their patients to clinical services, but set up intensive, intermediate, and self-care sections within each service. This latter method has certain drawbacks from the standpoint of flexibility, economy, and efficiency. Nevertheless, those who favor the separate specialty units claim there are advantages in intern and residency training, and in specialized nursing care.

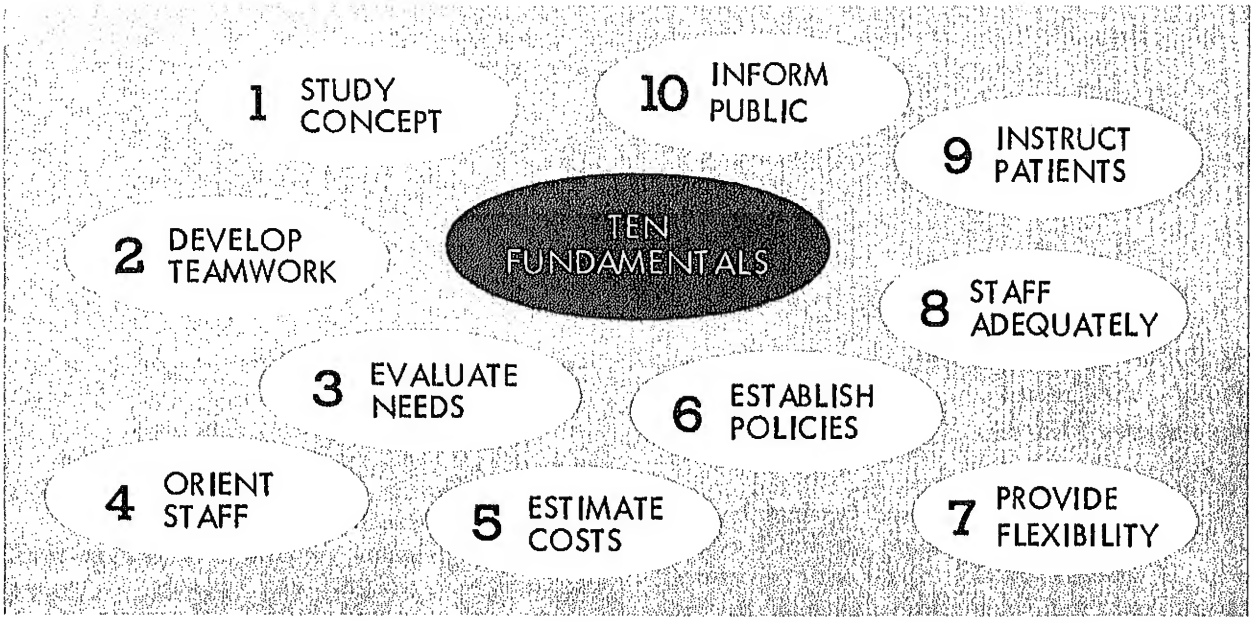
The student nurse will find that training in a progressive patient care hospital offers a well-rounded coordinated approach to patient care. Under the traditional pattern of assigning students to clinical services, the emphasis is on the medical or surgical problems of the patient, while under progressive patient care the main focus is on the total needs of the patient at a particular stage of his illness. In a PPC hospital, consideration is given to the amount and kind of care each patient requires, whether it be emotional, teaching, or rehabilitative in nature.

In many hospitals where the functional plan of nursing care is used, the intensive care unit provides the only opportunity for students to give complete care. Students in this unit may observe as many as six patients and develop a greater appreciation of team effort in the care of seriously ill patients. The ratio of staff to patients makes it possible for smaller assignments and makes supervision more feasible.

On the self-care unit the student realizes that the teaching and supportive needs of the patients may be great as compared to the limited amount of physical care required. The length of time that a student nurse should be assigned to a specific patient care unit need not necessarily conform to the traditional 3-month assignment to clinical services. Conceivably, a student could spend 1 or more months at a time on the intensive care or self-care units. This is a matter which must be resolved by each nursing school in light of the State requirements that students have a specified block of time on various clinical services before they will be eligible for State board examinations. One nursing school has worked out this problem by developing a plan for maintaining records to show the various types of patients attended by the student nurses. Care is taken to assign the student nurses to patients with clinical diagnoses which fall into different categories so that compliance is made with State requirements. One of the problems which may be encountered is centered on the variation in patient census on an intensive care unit. When the census is low, there may be less experience obtained by the students; therefore, flexibility of assignments to this unit must be considered.

## *Outline of Publication*

The second chapter presents a comprehensive picture of progressive patient care through a discussion of the 10 fundamentals which should be considered in setting up the various care units. Chapter III presents detailed descriptions of each of the five elements as well as equipment lists and architectural drawings of the inhospital elements.




# *Chapter II*—THE FUNDAMENTALS

What are the fundamental principles which may serve as a guide for hospitals planning to introduce progressive patient care? What are the pitfalls, and how may they be avoided?

From the studies and experience over the past several years, 10 fundamentals in carrying out any progressive patient care program have evolved. Although the manner in which these principles are adapted may vary among hospitals, each principle should be carefully considered during the early planning stages.

The 10 principles follow:

## Study Concept

***First—Become thoroughly familiar with the PPC concept***

A major organizational change should not be attempted overnight. In fact, several months or even a year may be required to lay the necessary groundwork. Representatives of all disciplines should become familiar with the program during this period. This can be accomplished by reviewing available literature, conferring with experienced persons in the field, and visiting hospitals practicing progressive patient care.

The Division of Hospital and Medical Facilities of the Public Health Service has been actively involved in conducting progressive patient care studies and in providing assistance to hospitals interested in initiating the program. In addition, valuable information concerning PPC has appeared in various medical and hospital journals as well as in popular publications during the past few years. (See Selected Bibliography, p. 64.)

## Develop Teamwork

***Second—Involve key persons of various disciplines***

If planning is to proceed smoothly, endorsement is needed by the key members of the board of trustees and the medical and nursing staffs, as well as by the hospital administrator. These persons may be among those to form the nucleus of an overall committee to

work out the details for setting up and implementing the program. Subcommittees are sometimes needed to carry out specific facets of the program.

The success or failure of the progressive patient care program often revolves about teamwork. It is therefore important that all persons involved in administering the program become part of the team.

## Evaluate Needs

*Third—Analyze your own hospital and determine needed innovations*

No two hospitals are identical in every respect. There may be variations in many areas such as patterns of medical practice, operational procedures, patient load, staff requirements, types of patients treated, architectural arrangement, dietary services and housekeeping facilities.

Many other areas of hospital operation are also affected and should be considered. These include purchasing, business, central supply, admitting, and medical record departments. It therefore becomes obvious that any how-to-do-it guide must be considered in light of the conditions prevailing in a specific hospital.

Most hospitals have found it beneficial to set up an experimental PPC unit in existing space to gain experience in operation before planning major architectural changes. This is especially true for the intensive care unit. Such pilot units can be established inexpensively, since many hospitals have an area where a five- to seven-bed unit could be located with a minimum of alterations. Equipment for this pilot unit is usually already available in various parts of the hospital.

Although in some instances it is advantageous to initiate one unit at a time, it has been found that the values of each unit are enhanced by the availability of other units. The type of patient, degree or intensity of illness, and services to be made available in a unit should be decided at the outset, since these factors will have an important bearing on the physical changes needed, as well as on the staffing required.

The architectural and equipment planning for each unit will depend on the scope of services and size of the unit, and on whether the space is to be adapted from an existing building or designed as a new structure. Although better services can be furnished in space especially designed for the purpose, there may be advantages in initiating the program in existing space, as previously noted. After sufficient experience has been gained, new construction can be planned in relation to a program which is in actual operation.

## Orient Staff

*Fourth—Conduct orientation program for staff*

The importance of staff orientation cannot be too strongly emphasized. Such a program should begin months before PPC is introduced into the hospital. The medical and nursing staffs, the hospital administrator, and others involved in the operation of the program should be included in this orientation.

Orientation sessions serve a threefold purpose. First, it is here that the staff becomes acquainted with the various aspects of PPC. Second, the meetings serve as an ideal setting for airing opinions regarding the innovations which would have to be considered. Third, they help stimulate the staff's interest and enthusiasm in initiating the program.

Once PPC has been introduced, the meetings can continue to be held, although orientation would not be their chief function. Instead, various aspects of the program could be discussed and evaluated with special emphasis on changes which might be proposed.

## Estimate Costs

*Fifth—Determine estimated operating costs and make special arrangements with third-party payers regarding insurance coverage*

Hospitals show a considerable range in their cost of operating the different patient care units. This is primarily due to the wide variation between units from the standpoint of nurse staffing patterns and the use of special equipment, as noted in chapter I.

Policies governing charges for services are established by each hospital. Some charge different rates on each unit, relating these charges to actual costs; others operate on the spread-of-risk principle and make no special charge for intensive care. The local variations in Blue Cross and other insurance coverage may have an important influence on how

hospitals set their charges. Insurance practices may also affect the willingness of hospitals to establish long-term care and self-care units. Insurance plans which do not ordinarily cover admission for diagnosis only make no exception for patients admitted to the self-care area for this sole purpose. Special attention must be given to hospital cost accounting, if charges on each unit are to be based on actual cost of the unit.

Regardless of the type of charging pattern planned, arrangements should be made with third-party payment plans before the program is initiated.

## Establish Policies

### *Sixth—Establish definitions and criteria as well as policies and procedures for implementing the functions of each care unit*

Criteria for admitting patients to and transferring them from the various care units must be established at the outset of the program. In addition, policies and procedures must be established to assure that the identity of each unit will be maintained.

As a preliminary to establishing criteria, it may be advantageous to

- clearly define the types of patients to be treated in each care area; and
- establish a checklist setting forth the observation or treatment requirements which warrant a patient's assignment to a specific unit.

Until the medical and nursing staffs become familiar with the patient requirements of these units, it may be desirable to maintain a formal checklist for each patient.

A suggested checklist of the major factors in classifying patients is presented in table 1. The assignment of any compelling indicator (designated as A) or of four or more moderate indicators (B) constitute sufficient reason for placing the patient in the intensive care unit. A patient should be in the intermediate care unit if he has been assigned one or two moderate indicators (B). A contraindicator (C) assigned to boxes in the self-care column as shown in the table indicates that the patient should not be in that unit. On the other hand, a checkmark in the blank columns under self-care would indicate that the patient may be assigned to that unit.

Prior to establishing care units in an existing facility, a classification study of patients should be compiled based upon a period of not less than 90 days. Each patient, except pediatric, maternity, and newborn, should be classified daily to ascertain the care unit to which he would be assigned. Information obtained from these evaluations will lay the foundation for determining the size of the unit. The checklist shown in the table may be used in classifying the patients.

In the event that progressive patient care units are being planned for a new hospital which has had no previous patient admission experience, estimates of bed needs may be based on information obtained from nearby hospitals with similar characteristics.

The prompt reassignment of patients to other care units as soon as transfer is warranted is essential to the effective operation of the program. To prevent any possible laxity, an enforcement mechanism should be established. One hospital advocates the use of committees to oversee the carrying out of admission and discharge policies in each unit. In another hospital, the nursing supervisor is responsible for advising the medical director or chief of staff if a patient remains in a care unit longer than necessary. The medical director, in turn, suggests to the attending physician that his patient is ready to be transferred. Instances of repeated misuse of the areas are reported to the control committee which may be empowered to act or recommend that the joint conference committee take appropriate action.

## Provide Flexibility

### *Seventh—Establish flexible zones between patient care units*

The classification study of patients described above should indicate the minimum and maximum number of beds needed for each care unit. To build or provide for the maximum number would result in some empty beds most of the time. To offset this, some beds in the units should be flexible; i.e., may be used as required by two areas.

Flexible zones, because of their interchangeable features and their ability to accommodate the overflow from the different care areas, help stabilize the use of hospital beds. They are especially important from the standpoint of making more beds readily available to accommodate emergency patients. Such

054119 O—62——3

| CRITERIA FOR EVALUATING PATIENTS | | PATIENT CLASSIFICATIONS | | |
|---|---|---|---|---|
| | | Intensive care | Intermediate care | Self-care |
| TPR and/or BP | More often than Q4h | A | C | C |
| | Q4h or less | | | |
| HEMORRHAGE | Constant-Imminent | A | C | C |
| | Controlled | B | B | C |
| | None | | | |
| STIMULANTS | Needed | | | C |
| | Not needed | | | |
| CONSCIOUSNESS | Unconscious-unstable | A | C | C |
| | Unconscious-stable | B | B | C |
| | Conscious | | | |
| ISOLATION | Yes | | | C |
| | No | | | |
| VOMITING | Uncontrolled | B | | C |
| | Occasional | B | B | |
| | None | | | |
| MOTOR ACTIVITY | Overactive | | | C |
| | Withdrawn | | | C |
| | Normal | | | |
| MOOD | Euphoric | | | C |
| | Depressed | | | C |
| | Normal | | | |
| THOUGHT CONTENT | Disoriented | | | C |
| | Oriented | | | |
| BATH | By nurse | B | | C |
| | Assisted | B | B | C |
| | Tub-shower | | | |
| BATHROOM PRIVILEGES | Not permitted | B | | C |
| | Assisted | | B | C |
| | Permitted | | | |
| MOBILITY | Bedfast | B | B | C |
| | Chair or walks with help | | B | C |
| | Ambulatory without help | C | | |
| DIETARY | Fed | B | | C |
| | Fed self | | B | C |
| | Goes or could go to food | C | | |
| OXYGEN THERAPY | Needed | B | B | C |
| | Not needed | | | |
| TRANSFUSION | Needed | B | B | C |
| | Not needed | | | |
| SUCTION | Needed | B | | C |
| | Not needed | | | |

*LEGEND:*
*A. Compelling Indicator*
*B. Moderate Indicator*
*C. Contra-indicator*

**Table 1. A checklist such as the one shown above may be used as a key in determining the placement of a patient.**

zones should be established between the intensive care and intermediate care units. They may also be useful between the self-care and intermediate care units.

A more detailed discussion of flexible zones is presented in chapter III.

## Staff Adequately

*Eighth—Provide adequate nurse staffing of units*

A careful evaluation of requirements for each patient care unit is a prerequisite to the development of workable plans. The establishment of an adequate nursing staff in the intensive care area precludes the need for special duty nurses. In fact, most PPC hospitals permit only their own specially trained staff to care for the critically ill.

The physician's job has been eased considerably since the nursing staff in each area has become more stable and has been trained to care for the special types of cases. Because of this specialized training, the physician is called upon less frequently to give instruction to nursing personnel.

## Instruct Patients

*Ninth—Instruct patients, prior to their transfer, concerning their new care unit*

Since the patient care units have their differences, particularly in regard to staffing, the patient should be advised of the reasons for the changes he will be experiencing in his new surroundings. The greatest transition occurs between intensive and the intermediate care units. Therefore, a patient making such a transfer should be given a careful explanation regarding the difference in the arrangement of services for these two units. He should be told that his condition no longer warrants the constant attention given him in the intensive care unit. Instead, he will be expected to summon a nurse or attendant when needed. This procedure should be fully explained. He must also understand that a different group of nurses will be attending him. Other instructions will also be needed, depending upon the patient and his condition. Those assigned to the self-care unit must be advised of the extent to which they are expected to take care of their own needs.

## Inform Public

*Tenth—Keep the public informed of the progressive patient care concept*

Patients, their relatives, and the general public should be advised of the many advantages of progressive patient care as a means to ensuring patient acceptance of the program.

Early PPC studies reveal that attitudes of patients reflect those of their physicians. If the patient's doctor favored progressive patient care, then the chances were excellent that the patient would also. In view of these findings, the role of the physician in keeping the public, and particularly his patients, informed becomes extremely important. A number of hospitals have found it advantageous to prepare brochures explaining the program in layman's terms. These brochures are made available to patients and their families—both in the hospital as well as in physicians' offices.

The conventional means of mass communication (newspaper and magazine articles, press, radio, television, lectures, exhibits) may also be used to keep the public abreast of the latest developments in the program.

## Summary Checklist

Although the 10 fundamentals might in themselves serve as a useful checklist for hospital administrators, the summary checklist which follows provides a more detailed guide for setting up a progressive patient care program. As will be noted, the arrangement and order of the checklist and fundamentals are not identical, yet each of the fundamentals has been incorporated, where appropriate, on the checklist.

## Summary Checklist for Setting Up Progressive Patient Care Program

**1. Lay necessary groundwork:**

a. Review all available literature.

b. Confer with hospitals practicing PPC.

c. Analyze existing problems and examine ways PPC would be beneficial.

**2. Arrange for thorough discussions among hospital staff and board of trustees:**

a. Schedule series of discussions and orientation conferences for physicians, nurses, and other staff members. Through group action, determine the degree to which PPC should be adopted.

b. Present, with staff assistance and participation, a well-outlined program to board of trustees. Topics should include:

(1) Principles and objectives of each patient care unit.

(2) Operational policies and procedures.

(3) Estimated beds and anticipated changes in design and equipment.

(4) Estimated costs and financing.

**3. Under joint agreement of the board of trustees and hospital staff, set forth principles and objectives of each patient care area:**

a. Outline in writing a well-defined description of principles, objectives, scope, and responsibility of each patient care unit.

**4. Establish operational policies and procedures.**

a. Form central committee and subcommittees to develop policies and detailed methods and procedures for carrying out program.

b. Establish criteria and procedures for admitting and transferring patients.

c. Plan periodic evaluation of functions of each patient care unit to ensure that objectives are being met.

d. Plan methodical evaluation of quality of individual patient care, including consultations.

e. Develop needed forms, records, and reports.

f. Determine procedures for a daily evaluation of patients. (The medical staff should set forth the criteria which would be used as a basis for the evaluation of each patient to determine whether he should remain on the unit, be transferred to another unit, or be discharged.)

g. Make provisions for modifications, if necessary, of services to meet the special needs of the patients in each patient care unit; e.g., diagnostic and therapy, dietary, housekeeping and supplies.

h. Make modifications, if needed, of policies in relation to such factors as visitors, safety, health education for patients, and information program for patients and general public.

i. Determine the nursing specialties and other competencies needed for each unit and make selection of personnel accordingly.

j. Orient physicians, nurses, and other personnel regarding policies and procedures of patient care units.

k. Provide inservice education for physicians, nurses, and others for any new competencies which may be required.

**5. Estimate the number of beds needed for each patient care unit and determine what changes are needed in design and equipment.**

a. After careful analysis based on past experience and anticipated future needs, make an estimate of the number of beds needed for each patient care unit. with emphasis on services and flexibility.

b. Determine location of patient care units, nurses' stations, kitchen location(s), dining areas, utility rooms, toilets, and other necessary facilities.

c. Determine architectural design and costs for alteration or construction of units.

d. Determine equipment needs and costs.

**6. Estimate cost and plan for adequate financing.**

a. Analyze the cost of operating each unit and the amount to be charged for services.

b. Make necessary arrangements with third-party payers for patient coverage in various units.

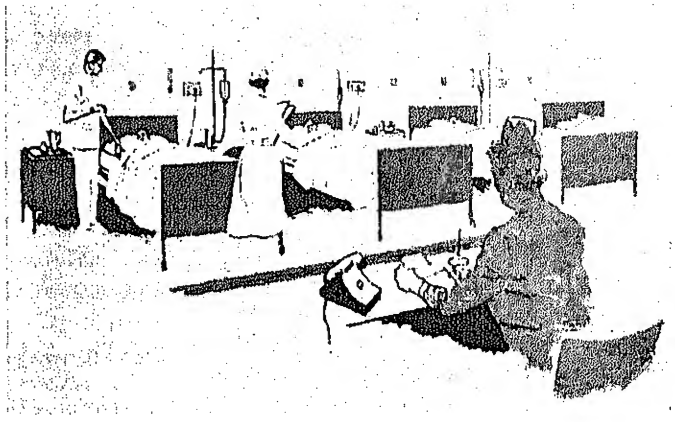
c. Develop business office records, charges, and collection methods.

# *Chapter III*—THE ELEMENTS

In the process of initiating the progressive patient care concept into a hospital, a number of important details must be considered which relate to many aspects of hospital operation, procedure, and physical structure. Decisions must be made at the outset concerning such factors as criteria for the selection of patients for each care unit, the services to be offered, special skills required of the nurses, the staffing needs of each unit, equipment needs, design changes including the provision of flexible zones, the need for operational changes, and the modifications required for other hospital departments.

Guidelines covering these and other aspects of hospital operation affected by progressive patient care are presented in parts I–V of this chapter. Wherever applicable the various pertinent factors are discussed as they relate to five elements—the intensive care unit, the intermediate care unit, the self-care unit, the long-term care unit, and home care. Part VI presents a suggested design of a 280-bed progressive patient care hospital.

## *Part I— Intensive Care*



### SELECTION OF PATIENTS

Critically and seriously ill patients requiring highly skilled nursing care and close and frequent, if not constant, nursing observation are assigned to the intensive care unit. Such patients include, for example major surgical cases following release from the recovery room, multiple injury or burn cases, major or threatened gastrointestinal hemorrhage, acute coronary occlusion, pneumonia, acute thrombophlebitis with danger of pulmonary embolus, and critically ill traumatic patients.

In determining the types of patients to be cared for in this unit, it is necessary to set up certain criteria, as described in chapter II. These criteria should be based on nursing needs of patients and not on their clinical diagnosis. Some of the more important criteria for admission include actual or impending hemorrhage, shock, pernicious vomiting, unconsciousness and coma. Patients requiring continuous gastric, intestinal, or pulmonary drainage, and those requiring frequent recording of vital signs and intake and output of fluids are also cared for here.

The question of where to care for critically ill infectious patients must be considered when the program is established. Many hospitals find that isolation technique is best carried out in the single- or two-bed rooms on the intensive care unit; in other instances where proper ventilation and negative pressure can be maintained, patients on isolation may be cared for in any of the glazed partitioned cubicles provided in the five- or six-bed rooms. Handwashing facilities must be provided.

Terminal patients requiring palliative services directed toward comfort, ease of pain, and tranquillity should not be assigned to this unit. Such patients should be cared for in the intermediate care unit with special duty nurses, if necessary and desired.

## SERVICES REQUIRED

Intensive care patients will require frequent observation of vital signs, measurement and recording of fluid intake and output, close and skilled observation for signs of pain, shock, hemorrhage, respiratory difficulty, increased intracranial pressure, and tension pneumothorax. Most of them will be receiving, during each 24-hour period, one or more treatments, such as transfusions, intravenous fluids, oxygen, continuous gastric or intestinal suction, and intensive anticoagulant therapy.

Of particular significance are the intensive care services which supplement those of the postanesthesia recovery room. In most hospitals, the recovery room provides services only during the day shift. Postoperative patients still requiring around-the-clock attention after the recovery room closes for the day can be moved to the intensive care unit where they will continue to be under the watchful eye of highly trained personnel. They may remain in this unit until they have recovered sufficiently to be moved to the intermediate care unit. In smaller hospitals of 100 beds or less, the recovery room and intensive care unit may be effectively combined.

added or those assigned must care for a greater number of patients than is recommended. When intensive care patients are all in one unit, the staffing can more easily be adjusted to meet the demands of census changes. One patient in an intensive care unit requires at least three nurses to observe him in 24 hours. At the same time, these same three nurses could also be observing three or four other patients.

The need for special equipment for each of these units must be considered. If patients are concentrated in only one unit, one piece of lifesaving equipment may be sufficient. On the other hand, if critically ill patients are located on two or three different units, it will be necessary to provide similar costly equipment for each unit.

## NURSING PERSONNEL

*Selection.*—Primary considerations in the selection of nurses for this unit are their special technical skills and personality attributes. The ability to use complicated equipment in carrying out procedures is an essential requirement. Moreover, the nurse must be especially knowledgeable in caring for seriously ill patients to know when a physician should be summoned and when emergency procedures should be instituted. Since patients are grouped without regard to clinical diagnosis, the nurse must be prepared to provide special care for a wide variety of postoperative cases and for patients with varying nursing needs. To keep abreast of advances in medical and nursing care, these nurses will need—from time to time—to receive supplementary instruction.

The temperament and personality of the nurse are of special importance. She must be able to work efficiently while carrying out a variety of activities, frequently under pressure and in emergency situations, yet not be rendered insensitive by caring for a continuing succession of seriously ill patients.

*Staffing.*—The staffing pattern will depend on the type of patients admitted, the degree or intensity of the illness, as well as the utilization of nonprofessional nurses, and the size and physical arrangement of the unit. For example, if a unit is established for open heart surgery patients or neurosurgery patients, it may require one nurse per patient per shift, whereas other intensive care patients may be cared for by one professional nurse and one nonprofessional nurse per unit of six patients for each shift. This pattern has been found satisfactory in several established intensive care units.

In a survey* of 68 hospitals with intensive care units, it was found that more professional nursing hours per bed were provided in small units than in those with a large number of beds. This was necessary since constant observation of patients requires the nurse to be in the room at all times—whether the room accommodates 4 or 10 patients. Fewer nurses are needed in a well-arranged room which has equipment, supplies, and medications immediately available.

Patients' needs do not diminish during the evening and night shifts, so the same complement of staff should be provided for the full 24 hours.

Continuity and stability of staff are of paramount importance in this area, so careful selection is necessary to obtain a staff which will not experience a rapid turnover.

The unit should be under the direction of a head nurse. If only one 5- or 6-bed room is needed, the direction may be from the head nurse on the adjacent intermediate care unit, but if there is more than one such room, a head nurse should be assigned exclusively to the intensive care unit.

Patients in the two-bed rooms may be cared for on the same basis as those in the six-bed room. If the condition of these patients warrants constant observation, one nurse must be assigned to each room. Generally these patients are less critical and two nursing personnel may then care for six patients in three rooms.

A further consideration in determining staffing needs is the fact that special duty nurses are not required on the intensive care unit.

## OPERATIONAL ASPECTS

*Direct admissions.*—Emergency patients should be admitted directly to this unit. This can be accomplished if policy permits the physician to call the head nurse of the unit to advise her to make the necessary preparations for receiving the patient (i.e., have bed available and carry out emergency orders). Thus, the admitting office will be bypassed. The saving of time between the physician's call and the actual beginning of treatment in the hospital may be lifesaving for critically ill patients.

*Recording routine procedures.*—A number of procedures required on this unit are applicable for most patients. To save the physician's time in placing individual orders for each patient, special forms should be developed and procedures established so that recordings will be made on a regular basis. Each form should cover a 24-hour period. Examples of the procedures which may be required include taking temperature, pulse, respirations, and blood pressure every 2 hours, as well as measuring and recording fluid intake and output.

*Organization within the unit.*—Certain services should be made immediately available to the intensive care nurses so they can more readily give their full attention to their patients. The nursing teams serving each multibed room share the supply and soiled holding rooms, nourishment room, and other services of the patient care unit. Arrangements should be made to have soiled and used equipment collected by an aide or orderly and taken to the soiled-holding room. An intercommunication system to the nursing station should be installed so that nurses can call for needed items not available in the room. All commonly used medications, supplies, and equipment, including sterile trays, should be kept in the intensive care room for immediate availability, preferably on mobile carts. Central supply and pharmacy should replace or replenish supplies according to a prearranged schedule to relieve the nurse of checking inventory and preparing requisitions.

*Visitors.*—Intensive care patients should not be denied visitors; however, the number should be kept to a minimum consistent with the patient's condition and needs. In most instances, visits should be limited to 5 minutes per hour. Because visits will be brief and space limited, chairs for visitors should not be provided. A family room located in or near the unit will permit relatives to be close to the patient without interfering with his treatments.

*Dietary practices.*—The dietary department should plan to offer some flexibility in its service to provide for the additional requirements created by grouping patients in accordance with nursing needs.

The dietary service will not be routine as most patients will receive modified diet trays consisting primarily of soft food and liquids. The nutritional requirements of these patients must be evaluated on a daily basis. Since numerous dietary requests and frequent changes of diets can be anticipated, a system of rapid transmission of diet requests from the intensive care unit to the dietary department should be established.

The tray service system selected by the hospital for the intensive care unit is planned around the needs of the unit to provide for efficient control of trays and to be least disturbing to the patients. A centralized tray service is generally more adaptive to the

*F. G. Abdellah, Burton Meyer, Helen Roberts, "Nursing Patterns Vary in Progressive Care." The Modern Hospital, 95: 85–91, August 1960.

dietary requirements of this unit, although a decentralized tray service may also be employed effectively. The system considered most flexible to meet the changing dietary requirements of the intensive care patients should be selected.

The design of the floor dietary facilities and the selection of equipment will depend on the food service system selected and the method of tray transport. The use of a vertical conveyor and dumbwaiter will require a minimal physical layout on the unit, whereas more space will be required for the mobile hot-cold tray conveyor. It is possible that some intensive care patients may not require any dietary service. Nourishment facilities shown in figure 9 (p. 59) are shared among intensive care, intermediate care, and long-term care units.

## DESIGN AND EQUIPMENT

*Pilot unit.*—In an existing hospital it may be found advantageous to establish a small pilot unit of one or more intensive care rooms before making extensive construction changes. The experience gained in such a pilot unit will demonstrate the effectiveness of intensive care for the critically ill patients and, at the same time, bring to light certain innovations which should be made before the concept is formally instituted. The ultimate design, number of beds, staffing patterns, equipment and supply requirements, and the administrative and clinical procedural changes which will be needed will become more readily discernible during this trial period.

The bay depth imposed by the requirements of the suggested five- and six-bed intensive care room is greater than that usually found in the conventional patient-care wing. It is therefore recommended that, wherever found more practical, the end of the wing be utilized. Thus, the width of the wing becomes the long dimension of the room. If columns and fire stairs interfere with the use of this space, the one room thus obtained will not satisfy the hospital's requirements for intensive care beds. Where these conditions force the use of the conventional bay depth of from 14 to 16 feet, the resulting six-bed room will be elongated to the point where the effective surveillance of patients will be reduced. Some difficulty may also be experienced in providing the storage closet and toilet room shown in the plans presented in part VI of this chapter, but generally the resulting space will provide for the functions of this room fairly satisfactorily.

Where it is not possible to provide a five- or six-bed room because of existing conditions, it may be possible to adapt a room of sufficient size to take care of four intensive care patients.

Provision of the ancillary facilities for this unit will again be a matter of adapting existing spaces as required.

*Size of rooms.*—For the purpose of this discussion, the five-bed and six-bed rooms have been adopted as the optimum size (see fig. 2). The number of rooms provided depends on the size of the hospital and the medical policies concerning their use. The rooms may be located on any patient floor with the possible exception of obstetrics.

*Special design and equipment features.*—The nurse in the intensive care rooms should be able to observe the patient closely and frequently, and be able to make necessary adjustments in his treatment as his needs change. Thus, it is recommended that in the five- or six-bed rooms, the beds be so placed in relation to the nurses' desk or work area, that the nurse will be able to view patients at any point in the room. An intercommunication system and nurses' call station connected to the nurses' station with a buzzer connection to other areas such as the utility room and floor kitchen should be provided at this desk. A dome light above the entrance to the room is also recommended. Electrical and telephone outlets will also be needed.

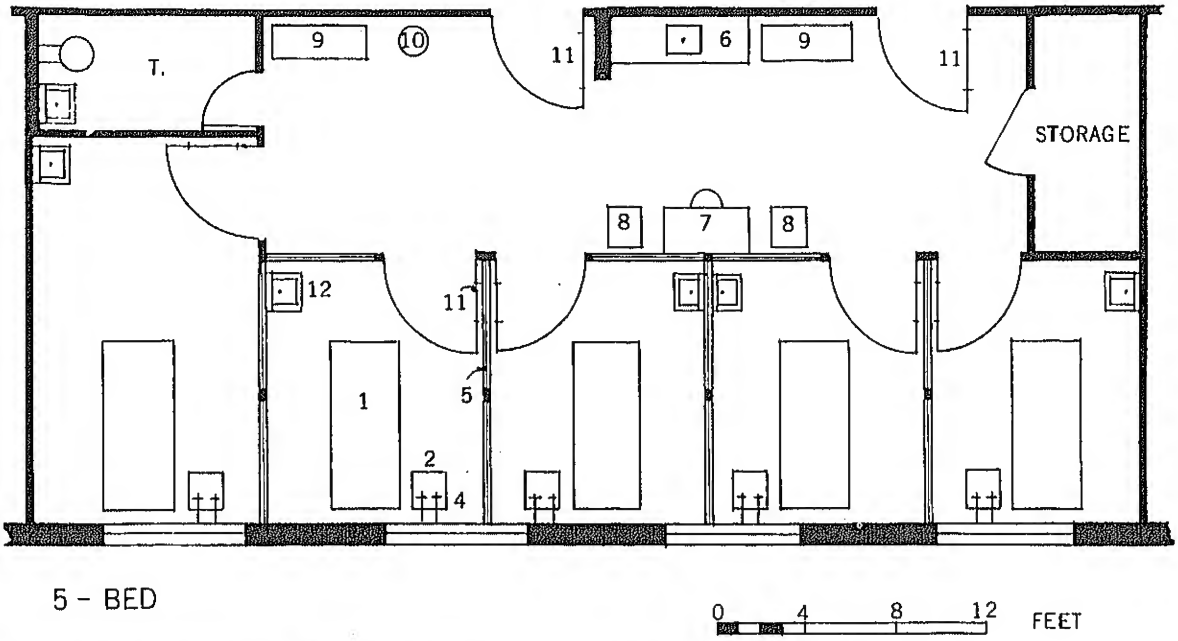
One or more of the beds should be enclosed by glazed partitions to provide the necessary privacy for the noisy or infectious patient; for those needing quiet, such as the coronary case; and for patients who are alert and aware of their surroundings.

Each bed should have an oxygen needle valve outlet with flowmeter and humidifier attached. Equally important is the need for two suction outlets with a regulator, pressure gauge, and 1-quart vacuum bottle. This eqiupment should be recessed to prevent breakage or damage. Two duplex convenience outlets for portable equipment should be provided at each bed. One 30-ampere, 230-volt, single-phase outlet will also be needed in the unit. For portable radiographic equipment a number of electrical outlets, 60 amperes, 230 volts, single phase, should be so located in the corridor for use in adjacent rooms. These outlets should be spaced for use of equipment with extension cords of approxiamtely 20 feet. All outlets and lights should be connected to the emergency power system. A nurse's call outlet at each bed is required for the nurse's use in an emergency.

Intravenous rods suspended from a track or ceiling-mounted hook over each bed or attached to each bed should be provided.

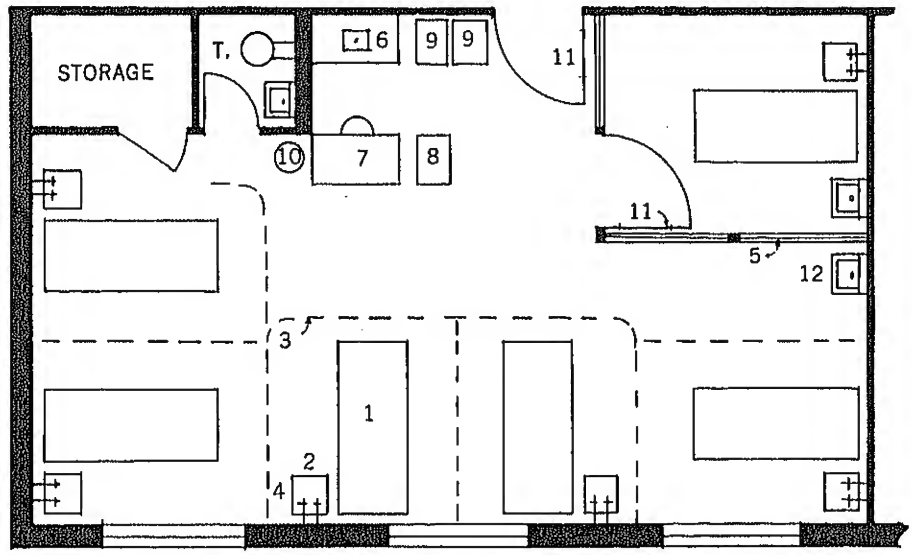
Wall-mounted sphygmomanometers which eliminate the need to move the instrument from bed to bed

*Figure 2.* Suggested layout for the 5-bed and 6-bed intensive care rooms.




5 - BED

0 4 8 12 FEET




6 - BED

*Legend*

1. Bed, Gatch spring, adjustable height, or adjustable recovery bed or stretcher, all with side rails and I.V. standards.
2. Bedside cabinet.
3. Cubicle curtains.
4. Oxygen and suction and electric outlets, 5 feet 3 inches above floor.
5. Partition to ceiling, glass 40 inches above floor.
6. Counter, 36 inches high, open below. Sink with gooseneck spout and knee or wrist controls. Wall cabinets above with inner locked narcotic compartment and inside light.
7. Charting desk, 42 inches high, with nurses' call system. Two-way communication with nurses' station. Corridor signal light.
8. Utility table with casters.
9. Utility supply cart.
10. Laundry hamper.
11. Vision panel.
12. Lavatory with gooseneck spout, knee, foot or wrist controls, shelf, soap dispenser, paper towel dispenser, foot-lever waste can.

654119 O—62——4

are suggested. Table, floor, or aneroid types may also be used.

A toilet should be provided for those patients whose clinical condition contraindicates bedpan use and for those patients on early ambulation. The watercloset should be equipped with bedpan lugs and flushing attachment for cleaning bedpans and for disposing of fluids. The lavatory should be provided with goose-neck spout and knee or wrist controls. An emergency calling station (pushbutton type) should be provided at each bed and at the nurse's desk in the room. These signals should be connected to the nurse's station in the unit.

A sink in a counter (knee or wrist control) will take care of the minor utility functions of this room. A medicine cabinet with a locked narcotics compartment should be provided.

Major utility functions should be carried out in the main utility rooms on the unit.

The door to the room should not be less than 3 feet 10 inches wide and should have a glass panel.

An equipment storage area is required in each five- or six-bed room for bulky items and other types of equipment. Cabinets, drawers, and shelving should be furnished to provide methodical separation and accessibility of the miscellaneous small items of equipment and supplies such as diagnostic instruments, sterile tray sets, linen, and parenteral solution flasks unless these smaller items of equipment and supplies are kept on carts in the room.

The standard amount of supplies to be stored in the intensive care unit will be governed by the frequency and volume of use and their accessibility from central supply, pharmacy, and other sources. However, a safety factor must be maintained which necessitates a 48-hour supply.

In addition to items already mentioned, the major movable equipment in the five- or six-bed room includes: variable height beds with Gatch springs and safety sides; cabinets with compartments for bedpan, wash basin, emeses basin, and other equipment necessary for the individual care of the patient; mobile carts, stocked with a basic complement of supplies; oxygen tents; resuscitating apparatus; pacemaker; and defibrillator. Additional equipment such as electrocardiography apparatus may be kept in a storage room located in the intensive care unit.

General lighting should be uniform throughout the room and of a level sufficient to permit easy observation (about 30 foot-candles) and controlled by a dimmer. Lighting for examinations should be provided by focusing examination lights.

Noise is apt to be a problem. Thus, every effort should be made in construction and by the staff to keep the noise level low.

*Air conditioning and ventilation.*—The ventilation requirements and the need for temperature and humidity conditions within certain specific limits will be dictated by the type of clinical conditions treated. Burnt patients, those with pneumonia, or those having had a major surgical operation are all susceptible in some degree to airborne organisms. These conditions must be considered in establishing ventilation rates required to assure an aseptic atmosphere within the room. The air-conditioning system should be designed to maintain the recommended ventilation rates, temperatures, and humidities within reasonable limits regardless of outdoor weather conditions. The system should include filters with a minimum of 90 percent efficiency in the retention of particulates in the 1- to 5-micron range. These filters should be located as close as possible to the intensive care room. They should be preceded in the system by a medium-grade filter.

The temperature of the intensive care room should be maintained at approximately 75° F. with a relative humidity of 40 percent. A minimum ventilation rate of three-room volumes of air per hour with no recirculation should be provided here. The intensive care room should be maintained at a positive air pressure relative to the air pressure of the corridor to prevent infiltration of contaminated air. To permit variations in temperature and humidity within the individual glazed cubicle, which will be required from time to time for the treatment of different clinical conditions, individual temperature and humidity controls should be provided for each cubicle. The system should be designed to provide a ventilation rate of six room volumes of air per hour with no recirculation for the cubicles and with a temperature range of 70° F. to 80° F. and a humidity range of 40 percent to 60 percent. Each cubicle should be provided with a ventilation air supply inlet and an exhaust air outlet, and the system should be balanced to provide the same air pressure in the cubicles as exists in the intensive care room.

*The flexible zone.*—In addition to the beds in the intensive care unit, an adjoining flexible zone is advisable to provide for the overflow of critically ill patients when census is high and to accommodate the less critically ill patients who no longer require around-the-clock observation and care. The movement of patients into this zone results in making more beds available to accommodate emergency intensive care patients.

These "flexible" beds can be provided in 1-bed or 2-bed conventional rooms located close to the nurses' station. The rooms should have oxygen-suction outlets, wall-hung sphygmomanometers, nurses' call, and the usual bedroom furniture. A view window in the corridor partition is required. A private or interconnecting toilet should be provided for each room.

Although the primary purpose of this flexible zone is to provide accommodations for the overflow in the intensive care unit, some of these beds may be used by intermediate care patients when the census of the intensive care unit is low.

The major factor in determining the size of the flexible zone is the degree to which the need for intensive care beds fluctuates within the individual hospital. For example, in a hospital studied by the Public Health Service, the number of intensive care patients ranged from a minimum of 10 to a maximum of 24, with a median of 17 patients. For efficient operation, therefore, the intensive care unit should be able to accommodate 17 beds. So that adequate accommodations can be made for the overflow during peak periods, the flexible zone should have provisions for at least seven patients. Since peak periods occur infrequently, it can be expected that the intermediate care patients will occupy some of these beds during most of the year.

The nursing supervision of the flexible zone will depend on the number of beds on the unit. A head nurse can usually be responsible for the care of 30 patients. If there are 12 to 18 intensive care patients, it should be possible for the head nurse of that unit to supervise the care of an additional 12 to 18 intermediate care patients; however, her nursing staff must be increased to take care of the additional patients.

The flexible zone is illustrated in the diagram of the fifth floor shown in figure 9 (p. 59).

*Ancillary facilities.*—The *nurses' station* should be located in the center of the intensive care unit for the use of the nurses responsible for the patients in the 1- or 2-bed rooms; space for a ward clerk should be provided. The equipment should include desks, counters, chart rack, and chairs for the nurses and ward clerk. The intercommunication system from the intensive care rooms and nurses' call system from the 2-bed flexible rooms should be connected to the ward clerk's position. A *charge nurse's office* should also be provided.

A *medication preparation room* should adjoin the nurses' station.

A *doctors' charting area* directly adjacent to the nurses' station is highly desirable. It should be arranged in such a manner as to permit use of a two-way chart rack with the nurses' station.

A *consultation office* for the use of the medical staff is desirable. A desk, several chairs, and other necessary furniture should be provided as well as a dome light and buzzer.

The *soiled-holding or utility room* need be provided only for cleanup of equipment and disposal of waste materials. No sterilizing should be done on this unit. Plans are based on the assumption that all sterilization will be centralized. A clinical sink, a two-compartment sink with a double drainboard, and a dome light and buzzer are recommended for the utility room.

The *dietary facilities* required in this unit must provide for service ranging from regular diets to tube feedings. This can best be accomplished in a centralized food service system. A nurses' calling system, including calling station and corridor signal light, should be installed, as well as an intercommunication system between the dietary facility in the area and the main kitchen.

Provision for *nurses' lockers and a restroom* in the unit will reduce the amount of time the nurses have to be away from their patients. The room should have enough lockers to take care of personnel needs for three shifts. The rest area should provide easy chairs, lamps, tables, and a makeup table. A toilet room with handwashing facilities is essential. A dome light and buzzer should be provided.

A *relatives' waiting room* in the intensive care unit permits relatives to be physically near the patients without interfering with treatment. Furnishings, patterned after the typical waiting room, include sofas, easy chairs, lamps, and tables, Toilet facilities should be provided. A booth telephone should also be nearby.

A *storage room* is needed in the intensive care unit for bulky equipment which must be available for immediate use. Examples include resuscitating equipment, EKG apparatus, and Stryker frames. The requirements for shelving and hooks need to be determined. Storage for patients' belongings should also be provided.

*Stretcher and wheelchair storage* is needed.

A *janitor's closet* should be provided for this unit.

Consideration should be given to the provision of an interns' room on or near the unit. Facilities for direct communication between the unit and interns' quarters are highly desirable.

Fire exits, smoke barriers, fire-resistant construction, finishes, and corridor and door widths will be similar to those of a conventional patient care unit.

## EQUIPMENT LIST

A suggested equipment list, based in general on the schematic plans presented in part VI of this chapter, is given below. This list presents the needs for an intensive care unit having six-bed and two-bed rooms along with ancillary facilities. The presentation has been arranged in such a fashion that ready adaptation can be made by hospitals of all sizes. For an explanation of equipment classification (groups I–III), see appendix A.

| Intensive care unit | Suggested quantity | |
|---|---|---|
| | 6-bed room | 2-bed room |
| **BEDROOMS** | | |
| **Group I Equipment** | | |
| Blinds, window | | |
| Board, bulletin, 26 x 24 inches | 1 | — |
| Cabinet, medicine with inner locked narcotic compartment | 1 | — |
| Clock outlet and electric clock | 1 | — |
| Closet, clothes with drawers | — | 1 |
| Counter, 36 inches high, open below | 1 | — |
| Curtain, cubicle and track | 5 | 2 |
| Dispenser: | | |
| Paper towel | 2 | — |
| Soap | 2 | — |
| Lavatory with gooseneck spout, foot, knee, or wrist control | 2 | — |
| Mirror over lavatory | 2 | — |
| Nurses' calling system, audiovisual: | | |
| Calling station | 7 | 2 |
| Corridor signal light | 1 | 1 |
| Outlet: | | |
| Central piped system: | | |
| Oxygen | 6 | 2 |
| Vacuum (suction) | 12 | 4 |
| Electric, grounding type: | | |
| Duplex (1 near floor for each bed) | 12 | 4 |
| Single, 30 amp., 230 volt, single phase | 1 | — |
| Telephone | 1 | 1 |
| Partition, floor to ceiling, glass 40 inches above floor | | — |
| Shelf above lavatory | 2 | — |
| Sink, in counter, gooseneck spout, foot, knee or wrist control | 1 | — |
| Vision panel | | |
| **Group II Equipment** | | |
| Bed, Gatch spring, standard size, adjustable height [1] | 6 | 2 |
| Bed sides, safety, adjustable, pair | 6 | 2 |
| Cabinet, bedside | 6 | 2 |
| Can, waste, foot lever | 1 | — |
| Cart, utility [2] | 2 | — |
| Chairs: | | |
| Easy, seat and back cushions | — | 1 |
| Office, swivel without arms | 1 | — |
| Straight, patient's room | — | 2 |
| Crib [3] | | |
| Desk, chart with rack for charts, 42 inches high | 1 | — |
| Hamper, linen | 1 | — |
| Lamp, desk | 1 | — |
| Light: | | |
| Bed | 6 | 2 |
| Examining | 1 | — |
| Mattress | 6 | 2 |
| Sphygmomanometer [4] | 6 | — |
| Standard, intravenous, bed mounted | 6 | 2 |
| Table: | | |
| Overbed | — | 2 |
| Utility with casters | 2 | — |
| **Toilet** | | |
| **Group I Equipment** | | |
| Dispenser: | | |
| Paper towel | 1 | 1 |
| Soap | 1 | 1 |
| Fixture, toilet paper | 1 | 1 |
| Lavatory with gooseneck spout, foot, knee or wrist control | 1 | 1 |
| Mirror, above lavatory | 1 | 1 |
| Nurses' calling system, audiovisual: | | |
| Calling station | 1 | 1 |
| Rail, grab | 1 | 1 |
| Shelf above lavatory | 1 | 1 |
| Watercloset with improved-type bedpan flushing attachment | 1 | 1 |
| **Group II Equipment** | — | — |
| **Equipment and Supply Storage** | 1 | — |
| **Group I Equipment** | | |
| Cabinet, storage with compartments and drawers for small equipment, sterile trays, and supplies | | — |

See footnotes at end of table.

| Intensive care unit | Suggested quantity | |
|---|---|---|
| | 6-bed room | 2-bed room |
| **BEDROOMS—Continued** | | |
| **Equipment and Supply Storage—Continued** | | |
| **Group II Equipment** | | |
| Irrigator, tidal, bladder | 1 | — |
| Light, examining | 1 | — |
| Ophthalmoscope-otoscope, combination set | 1 | — |
| Oxygen accessories for central piped system: [5] | | |
| Flowmeter, complete with adapter and hose nipple outlet | 6 | — |
| Humidifier | 6 | — |
| Tent, oxygen | 2 | — |
| Vacuum (suction) accessories for central piped system: [5] | | |
| Suction bottle wall unit, complete with regulator, gauge, 1-quart bottle, cap and hose assembly | 6 | — |
| Suction regulator, intermittent, adjustable, 90–120 mm. Hg | 2 | — |
| **Group III Equipment** | | |
| Bag, catheter, Foley | 1 | — |
| Bottle: | | |
| Irrigation and drainage | 3 | — |
| Rubber, hot water-ice combination | 4 | — |
| Gloves, rubber, assorted sizes, pair | 6 | — |
| Holder, chart to fit rack in charting counter | 6 | — |
| Inhalation therapy accessories: | | |
| Catheter, oxygen, nasal, green: [6] | | |
| 8 Fr. | 4 | — |
| 12 Fr. | 4 | — |
| 14 Fr. | 4 | — |
| Mask, oxygen, face: [6] | | |
| Medium | 2 | — |
| Small | 2 | — |
| Tent, oxygen, face [6] | | |
| Irrigator, metal with handle, 2 quart | 1 | — |
| Jar, metal, dressing with cover, 1 quart | 3 | — |
| Needles, hypodermic, regular Luer: [6] | | |
| 18-gauge, 2 inches | 12 | — |
| 20-gauge, 1½ inches, short bevel | 12 | — |
| 20-gauge, 2 inches | 12 | — |
| 22-gauge, 1½ inches | 12 | — |
| 25-gauge, ⅝ inch | 24 | — |
| Stethoscope | 2 | — |
| Syringe: | | |
| Glass, Luer: [6] | | |
| 2 cc | 24 | — |
| 5 cc | 2 | — |
| 10 cc | 2 | — |
| 20 cc | 2 | — |
| 30 cc | 2 | — |
| 50 cc | 2 | — |
| Insulin | 2 | — |
| Irrigating, 30 cc. with bulb | 2 | — |
| Tourniquet | 4 | — |
| Tubing, rubber or plastic, assorted sizes [6] | 6 | — |
| Urinometer | 1 | — |
| Utensils: | | |
| Basin, wash, shallow, 13 inch O.D., 4¼ quart | 6 | — |
| Bedpan, adult | 6 | — |
| Cups, solution, 2 oz | 6 | — |
| Dish, soap, 4 x 5 inches | 6 | — |
| Pan, pus-emesis, 8 x 2 inches deep | 6 | — |
| Urinal | 6 | — |
| Tray sets—complete with instruments, linen, and basin: | | |
| Bladder, irrigation | 1 | — |
| Blood transfusion administration | 2 | — |
| Cardiac arrest | 1 | — |
| Catheterization (male and female) | 2 | — |
| Dressing and suture removing | 3 | — |
| Enema | 1 | — |
| Gynecology examination | 1 | — |
| Intratracheal | 1 | — |
| Intravenous administration | 3 | — |
| Lumbar puncture | 1 | — |
| Physical examination | 2 | — |
| Skin preparation | 1 | — |
| Thoracentesis | 1 | — |
| Tracheostomy | 1 | — |
| Venesection (cut down) | 2 | — |

| Intensive care unit | Suggested quantity for unit |
|---|---|
| **CONFERENCE ROOM** | |
| **Group I Equipment** | |
| Board, bulletin, 26 x 24 inches | 1 |
| Cabinet, wall | 1 |
| Clock outlet and electric clock | 1 |
| Screen, projection, wall mounted, roll type | 1 |
| **Group II Equipment** | |
| Board, chalk, portable, 4 x 8 feet | 1 |
| Chair, office, arm | 6 |
| Table, conference | 1 |

See footnotes at end of table.

| Intensive Care Unit | Suggested quantity for unit |
|---|---|
| **CORRIDOR** | |
| **Group I Equipment** | |
| Outlet, electric, single, 60 amp., 230 volt, single phase, for portable radiographic unit | 1 |
| Water cooler, recessed | — |
| **Group II Equipment** | |
| **DOCTORS' CHARTING ROOM** | |
| **Group I Equipment** | |
| Clock outlet and electric clock | 1 |
| Counter, 30 inches high, open below | 1 |
| **Group II Equipment** | |
| Chair, office, swivel without arms | 2 |
| **EQUIPMENT STORAGE ROOM** | |
| **Group I Equipment** | |
| Shelving | |
| **Group II Equipment** | |
| Artificial kidney apparatus [7] | 1 |
| Defibrillator | 2 |
| Electrocardiograph | 1 |
| Hot pack machine | 1 |
| Hypothermia apparatus [7] | 1 |
| Oxygen accessories for central piped system: [5] | |
| Flowmeter, complete with adapter and hose nipple outlet | 12 |
| Humidifier | 12 |
| Nebulizer | 6 |
| Pacemaker, cardiac | 2 |
| Respirator, portable [7] | 1 |
| Resuscitating apparatus, automatic | 1 |
| Resuscitator, intermittent, positive pressure [5] | 1 |
| Suction apparatus, electric, on stand [7] | 6 |
| Table, overbed | |
| Vacuum (suction) accessories for central piped system: [5] | |
| Suction bottle wall unit, complete with regulator, gauge, 1-quart bottle, cap and hose assembly | 12 |
| Suction regulator, intermittent, adjustable, 90–120 mm. Hg | 6 |

See footnotes at end of table.

| Intenssve Care Unit | Suggested quantity for unit |
|---|---|
| **JANITORS' CLOSET** | |
| **Group I Equipment** | |
| Dispenser: | |
| Paper towel | 1 |
| Soap | 1 |
| Rack: | |
| Ladder | 1 |
| Mop handle | 1 |
| Shelf, supply | 1 |
| Sink, depressed, floor | 1 |
| **Group II Equipment** | |
| Ladder, 2 step with rails | 1 |
| Receptacle, waste | 1 |
| Truck, mopping, 2 buckets with wringer | 1 |
| **MECHANICAL EQUIPMENT ROOM** | 1 |
| **Group I Equipment** | |
| **Group II Equipment** | — |
| **MEDICINE PREPARATION ROOM** | 1 |
| **Group I Equipment** | |
| Cabinet, medicine, with inner locked narcotic compartment | 1 |
| Counter, 36 inches high, cabinets below | 1 |
| Dispenser, paper towel | 1 |
| Light above counter | 1 |
| Rack, wall-mounted, medication cards | 1 |
| Sink, medicine, in counter with gooseneck spout | 1 |
| **Group II Equipment** | |
| Can, waste, foot lever | 1 |
| Cart, utility (for medication trays) | 1 |
| Refrigerator, counter type, 4 cubic feet | 1 |

| Intensive Care Unit | Suggested quantity for unit |
|---|---|
| **NURSES' LOUNGE, TOILET AND LOCKER ROOM** [8] | |
| **Lounge** | |
| **Group I Equipment** | |
| Board, bulletin, 26 x 24 inches | 1 |
| Clock outlet and electric clock | 1 |
| Counter, vanity, 30 inches high, open below | 1 |
| Mirror: | |
| Above counter | 1 |
| Full length, wall-mounted | 1 |
| Nurses' calling system, audiovisual: | |
| Duty station | 1 |
| **Group II Equipment** | |
| Chair: | |
| Easy, seat and back cushions | 2 |
| Straight | 4 |
| Lamp: | |
| Floor | 1 |
| Table | 1 |
| Table, lamp | 1 |
| **Locker Room** | |
| **Group I Equipment** | |
| Locker, clothes, steel, 15 x 18 x 60 inches | |
| **Group II Equipment** | |
| Chair, straight | 2 |
| **Corridor** | |
| **Group I Equipment** | — |
| **Group II Equipment** | — |
| **Toilet** | 1 |
| **Group I Equipment** | |
| Dispenser: | |
| Paper towel | 1 |
| Soap | 1 |
| Fixture, toilet paper | 1 |
| Lavatory with wrist control | 1 |
| Mirror above lavatory | 1 |
| Shelf above lavatory | 1 |
| Watercloset | 1 |
| **Group II Equipment** | — |
| **NURSES' OFFICE** | |
| **Group I Equipment** | |
| Clock outlet and electric clock | 1 |
| **Group II Equipment** | |
| Bookcase [9] | 1 |
| Cabinet, filing, lettersize, 2 drawer | 1 |
| Chair: | |
| Office, swivel with arms | 1 |
| Straight | 2 |
| Desk, office, single pedestal | 1 |
| Lamp, desk | 1 |
| **NURSES' STATION** | |
| **Group I Equipment** | |
| Board, bulletin, 26 x 24 inches | 1 |
| Clock outlet and electric clock | 1 |
| Counter, 30 inches high: | |
| Drawers, kneespace and foldaway typewriter shelf below | 1 |
| Open below | 2 |
| Nurses' calling system, audiovisual: | |
| Master station | 1 |
| Rack, chart, 2-way between Doctors' Charting Room | 1 |
| Station, pneumatic tube system | 1 |
| **Group II Equipment** | |
| Chair: | |
| Office, swivel without arms | 6 |
| Posture | 1 |
| File, pigeonhole for forms | 1 |
| Typewriter, standard | 1 |

See footnotes at end of table.

| Intensive Care Unit | Suggested quantity for unit |
|---|---|
| **NURSES' TOILET** | |
| **Group I Equipment** | |
| Dispenser: | |
| Paper towel | 1 |
| Soap | 1 |
| Fixture, toilet paper | 1 |
| Lavatory with wrist control | 1 |
| Mirror above lavatory | 1 |
| Shelf above lavatory | 1 |
| Watercloset | 1 |
| **Group II Equipment** | |
| Can, sanitary, waste | 1 |
| **OFFICE (CONSULTATION)** | |
| **Group I Equipment** | |
| Clock outlet and electric clock | 1 |
| **Group II Equipment** | |
| Chair: | |
| Easy, seat and back cushions | 2 |
| Office, swivel with arms | 1 |
| Straight | 1 |
| Desk, office, single pedestal | 1 |
| Lamp, desk | 1 |
| **Toilet** | |
| **Group I Equipment** | |
| Dispenser: | |
| Paper towel | 1 |
| Soap | 1 |
| Fixture, toilet paper | 1 |
| Lavatory | 1 |
| Mirror above lavatory | 1 |
| Shelf above lavatory | 1 |
| Watercloset | 1 |
| **Group II Equipment** | — |
| **PATIENTS' CLOTHES STORAGE ROOM** | |
| **Group I Equipment** | |
| Shelving | |
| **Group II Equipment** | — |

| Intensive Care Unit | Suggested quantity for unit |
|---|---|
| **SHOWER ROOM** | |
| **Group I Equipment** | |
| Bar, towel | 1 |
| Nurses' calling system, audiovisual: | |
| Calling station | 1 |
| Corridor signal light | 1 |
| Rail, grab | 2 |
| Receptacle, soap | 1 |
| Shower compartment with curtain and rod | 1 |
| **Group II Equipment** | |
| Chair, straight | 1 |
| **STRETCHER AND WHEELCHAIR ALCOVE** | — |
| **Group I Equipment** | |
| **Group II Equipment** | |
| Stretcher, wheeled | 2 |
| Wheelchair | 4 |
| **TREATMENT ROOM** | |
| **Group I Equipment** | |
| Board, bulletin, 26 x 24 inches | 1 |
| Cabinet, wall | 1 |
| Counter, 36 inches high, open below | 1 |
| Dispenser: | |
| Paper towel | 1 |
| Soap | 1 |
| Illuminator, film, double, recessed | 1 |
| Nurses' calling system, audiovisual: | |
| Calling station | 1 |
| Corridor signal light | 1 |
| Sink, in counter with gooseneck spout, foot, knee or wrist control | 1 |
| **Group II Equipment** | |
| Can, waste, foot lever | 1 |
| Cart, utility | 1 |
| Chair, straight | 1 |
| Kick bucket | 1 |
| Light, examining | 1 |
| Scale, clinic with measuring rod | 1 |
| Stool: | |
| Foot | 1 |
| Operators, adjustable, 19–25 inches | 1 |

See footnotes at end of table.

| Intensive Care Unit | Suggested quantity for unit |
|---|---|
| **TREATMENT ROOM—Continued** | |
| **Group II Equipment—Continued** | |
| Table: | |
| Examining, metal, flat top with pad | 1 |
| Instrument: | |
| 16 x 20 inches | 1 |
| Mayo | 1 |
| **FAMILY WAITING ROOM** | |
| **Group I Equipment** | |
| Blinds, window | |
| Clock outlet and electric clock | 1 |
| **Group II Equipment** | |
| Chair, easy, seat and back cushions | 1 |
| Lamp, table | 2 |
| Rack, magazine | 1 |
| Sofa, 3 passenger | 1 |
| Table, lamp | 1 |

| Intensive Care Unit | Suggested quantity for unit |
|---|---|
| **Toilet** | |
| **Group I Equipment** | |
| Dispenser: | |
| Paper towel | 1 |
| Soap | 1 |
| Fixture, toilet paper | 1 |
| Lavatory with blade handles | 1 |
| Mirror above lavatory | 1 |
| Shelf above lavatory | 1 |
| Watercloset | 1 |
| **Group II Equipment** | — |

[1] Recovery-type bed also available.
[2] Technic determines quantity.
[3] As required.
[4] Wall-mounted, or portable types available.
[5] Must fit installed wall outlet.
[6] Disposable also available.
[7] According to need.
[8] For use by nursing personnel in patient care area.
[9] Built-in shelves may be preferred.

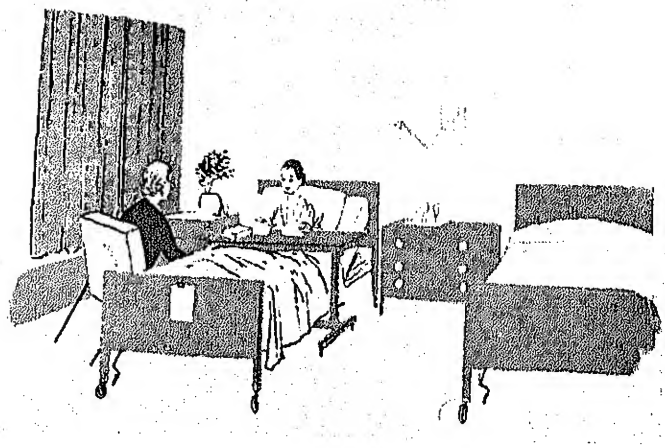
Note

A blank under the column "suggested quantity" indicates that the item is required but the quantity is not determined. The quantity is determined upon correlation of schematic plans.
The dash (—) indicates that the item is not applicable to the particular area.



054110 O—62——5

# *Part II— Intermediate Care*



## SELECTION OF PATIENTS

Patients assigned to the intermediate care unit are both the moderately ill and those for whom the treatment can only be palliative (the terminally ill). Examples of those in the first category include patients moderately ill with pneumonia or acute cholecystitis; the postoperative patient recovering from an uncomplicated appendectomy, herniotomy, or pelvic repair; and the partially recovered patient transferred from intensive care. Many of these patients will be ambulatory for short periods. A large proportion of the hospital patients will be admitted to and discharged from this unit. Children requiring care at the intermediate level will be placed on the pediatric unit.

## SERVICES REQUIRED

The services provided on the intermediate care unit will, in many respects, be similar to those offered on a general medical or surgical nursing unit. Many patients will have bathroom privileges and most are able to plan with the nurse for their own care and can make their needs known. The physician and nurse must observe and evaluate each patient's needs in order to assist him in the fullest possible recovery. The nurse may need to teach him the techniques of ambulation following surgery or a long stay in bed and help him accept any limitations produced by his illness.

Patients about to be discharged may need instructions for living at home. Many hospitals have developed a printed instruction sheet which answers frequently encountered questions. These suggestions can be amplified by personalized guidance from the nurse.

Encouragement and supervision of the activity of the convalescent patient are important aspects of nursing care in this unit. Teaching of good health practices is equally important.

## NURSING PERSONNEL

*Selection.*—Nurses assigned here should have the same attributes as the nurses who serve the usual general medical or surgical floor. Emphasis needs to be placed on interest and ability in health teaching, and more time should be available for this important function because there will be fewer patients requiring many technical procedures.

*Staffing.*—Since the intermediate care unit is not disrupted by emergencies, a reasonably stable staffing pattern is possible. The staffing requirements here call for the services of professional and licensed practical nurses as well as nurses' aides. The needs vary with each shift; nevertheless, at all times, among those on duty there must be at least one professional nurse. Some hospitals have shown that during the day shift, 1 staff member can adequately serve 5 or 6 patients; during the evening shift 1 nurse may be assigned to 7 patients; and during the night shift 1 nurse is needed for 11 patients.

## OPERATIONAL ASPECTS

*General.*—By and large, the operational aspects will be similar to those of the conventional hospital from the standpoint of nurse-staffing patterns, visitors' privileges, and hospital services such as dietary, housekeeping, supply, and laundry.

*Admissions.*—A patient may be admitted into this unit either as a transfer from another unit or directly from the admitting office, as in the conventional hospital. From this unit he may either be sent to another unit or directly home, depending on his condition and the operational policies of the hospital.

*Dietary practices.*—Since the patient in this unit is, as a rule, beginning to regain his interest in food, the dietitian is in a position to begin planning for his nutritional education. The area provides an opportunity for the dietitian to evaluate the patient's dietary needs and enables her to involve the patient and the patient's family in the planning. The dietary department will want to give particular attention to providing nutritious food appetizingly prepared and attractively served.

In the intermediate care unit, space for minimal dietary service facilities should be included to provide for service and storage of nourishments and preparation of simple, special requests. The dayroom should be sized to provide space for dining where centrally prepared trays can be distributed to the ambulant patient in preference to receiving traditional bedside tray service. When such facilities are provided for communal dining, patients are given an opportunity to eat together and, thus, to enjoy social amenities which are important in achieving early convalescence.

## DESIGN AND EQUIPMENT

The units comprising the intermediate care area are similar to the patient care units in the conventional general hospital and are equipped in like fashion. The most feasible size appears to be from 30 to 35 beds.

A number of patients will be ambulatory and will require space for day and dining facilities. The latter may be provided in the dayroom or a separate space may be indicated depending on the number of patients to be served.

This unit may require more central shower and bath facilities than are usually found in the conventional patient care unit. The patient rooms will be one- and two-bed rooms, and possibly four-bed rooms with private or interconnecting toilets.

A nurse's station and medication preparation room, supply room, soiled-holding (utility) room, nourishment room, storage room, and janitor's closet will be required for each unit. The need for isolation facilities as well as treatment and conference rooms should be considered.

Requirements for fire exits, smoke barriers, fire-resistant construction, finishes, and corridor and door widths will be the same as for a conventional unit.

Two flexible zones can be made available to patients on this unit. One would be the zone linked to the intensive care unit described earlier and the other could also serve patients in the self-care unit. As in the case of the flexible zone described under the intensive care unit, the size of the zone would depend on the degree of census fluctuation experienced by the two care units. The number of beds provided in this zone is not a critical factor since the admission of many of the patients in these two units is elective and therefore can be scheduled for periods when accommodations can be made available.

*Ventilation and air conditioning.*—The air conditioning and ventilation of this unit will be the same as that of any medical or surgical nursing unit in the general hospital. The absence of any specific isolation quarters presumes that any bedroom may be used for isolation purposes. This situation precludes the use of a central recirculation system for bedrooms. The system should be a type which provides a constant supply of ventilating air, with provision for recirculation of air within the individual room. This eliminates the mixing of air from room to room and reduces the possibility of cross-infection. The individual room toilet exhaust system may serve as the general ventilation exhaust from each room. Each patient room should have a slight negative air pressure relative to the air pressure in the corridor. A temperature of 75° F. with a relative humidity of 40 percent should be maintained at all times. A ventilation rate equivalent to two-room-volumes of air per hour should be provided. Filters with an efficiency of not less than 60 percent in the retention of particulates in the 1- to 5-micron range are recommended for the primary air system. These filters should be preceded in the system by a roughing filter to prolong the life of the more efficient filter.

## EQUIPMENT LIST

A suggested equipment list for the intermediate care unit is presented below. See appendix A for an explanation of equipment classification.

| Intermediate care unit | Suggested quantity for unit | |
|---|---|---|
| | 1-bed room | 2-bed room |
| **BEDROOMS** | | |
| **Group I Equipment** | | |
| Blinds, window | | |
| Closet, clothes with drawers | 1 | 1 |
| Curtain, cubicle and track | — | 2 |
| Nurses' calling system, audiovisual: | | |
| Calling station | 1 | 1 |
| Corridor signal light | 1 | 1 |
| Outlet: [1] | | |
| Central piped system: | | |
| Oxygen | 1 | 1 |
| Vacuum (suction) | 1 | 1 |
| Electric, grounding type, duplex (1 near floor) | 2 | 4 |
| **Group II Equipment** | | |
| Bed, Gatch spring, standard size, adjustable height [2] | 1 | 2 |
| Bed sides, safety, adjustable, pair | 1 | 2 |
| Cabinet, bedside | 1 | 2 |
| Chair: | | |
| Easy, seat and back cushions | 1 | 1 |
| Straight, patient's room | 1 | 2 |
| Lamp, floor | 1 | 2 |
| Light, bed | 1 | 2 |
| Mattress, bed | 1 | 2 |
| Table, overbed | 1 | 2 |
| **Toilet** | | |
| **Group I Equipment** | | |
| Bar, towel | 1 | 1 |
| Dispenser: | | |
| Paper towel | 1 | 1 |
| Soap | 1 | 1 |
| Fixture, toilet paper | 1 | 1 |
| Lavatory with gooseneck spout, wrist control [3] | 1 | 1 |
| Mirror above lavatory | 1 | 1 |
| Nurses' calling system, audiovisual: | | |
| Calling station | 1 | 1 |
| Rail, grab | 1 | 1 |
| Receptacle, soap | 1 | 1 |
| Shelf above lavatory | 1 | 1 |
| Watercloset | 1 | 1 |
| **Group II Equipment** | — | — |
| **Shower** | | |
| **Group I Equipment** | | |
| Shower compartment with curtain and rod | 1 | — |
| **Group II Equipment** | — | — |

| Intermediate Care Unit | Suggested quantity for unit |
|---|---|
| **BATHROOM AND TOILET** | |
| **Group I Equipment** | |
| Bar, towel | 1 |
| Bathtub | 1 |
| Dispenser: | |
| Paper towel | 1 |
| Soap | 1 |
| Fixture, toilet paper | 1 |
| Lavatory with wrist control | 1 |
| Mirror above lavatory | 1 |
| Nurses' calling system, audiovisual: | |
| Calling station | 1 |
| Corridor signal light | 1 |
| Rail, grab | 1 |
| Receptacle, soap | 1 |
| Shelf above lavatory | 1 |
| Watercloset | 1 |
| **Group II Equipment** | |
| Chair, straight | 1 |
| **CONFERENCE ROOM** | |
| **Group I Equipment** | |
| Board, bulletin, 26 x 24 inches | 1 |
| Cabinet, wall | 1 |
| Clock outlet and electric clock | 1 |
| Screen, projection, wall mounted, roll type | 1 |
| **Group II Equipment** | |
| Board, chalk, portable, 4 x 8 feet | 1 |
| Chair, office, arm | 6 |
| Table, conference | 1 |
| **CORRIDOR** | |
| **Group I Equipment** | |
| Water cooler, recessed | 1 |
| **Group II Equipment** | — |

See footnotes at end of table.

| Intermediate Care Unit | Suggested quantity for unit |
|---|---|
| **DAYROOM** | |
| **Group I Equipment** | |
| Blinds, window | |
| Clock outlet and electric clock | 1 |
| Nurses' calling system, audiovisual: | |
| Calling station | 1 |
| Corridor signal light | 1 |
| **Group II Equipment** | |
| Chair: | |
| Desk | 1 |
| Dining, with arms | 8 |
| Easy, seat and back cushions | 2 |
| Desk, writing | 1 |
| Lamp: | |
| Desk | 1 |
| Table | 2 |
| Sofa, 3 passenger | 1 |
| Stand, folding, tray | 1 |
| Table: | |
| Dining, 36 x 36 inches | 2 |
| End | 2 |
| Television set and/or radio | 1 |
| **Storage Room** | |
| **Group I Equipment** | |
| Shelving | |
| **Group II Equipment** | — |
| **Toilet** | |
| **Group I Equipment** | |
| Dispenser: | |
| Paper towel | 1 |
| Soap | 1 |
| Fixture, toilet paper | 1 |
| Lavatory | 1 |
| Mirror above lavatory | 1 |
| Shelf above lavatory | 1 |
| Nurses' calling system, audiovisual: | |
| Calling station | 1 |
| Watercloset | 1 |

| Intermediate Care Unit | Suggested quantity for unit |
|---|---|
| **Group II Equipment** | |
| Can, waste, foot lever | 1 |
| **DOCTORS' CHARTING ROOM** | |
| **Group I Equipment** | |
| Clock outlet and electric clock | 1 |
| Counter, 30 inches high, open below | 1 |
| **Group II Equipment** | |
| Chair, office, swivel without arms | 2 |
| **EQUIPMENT STORAGE ROOM** | |
| **Group I Equipment** | |
| Shelving | |
| **Group II Equipment** [4] | |
| Oxygen accessories for central piped system: [5] | |
| Flowmeter, complete with adapter and hose nipple outlet | 4 |
| Humidifier | 4 |
| Vacuum (suction) accessories for central piped system: [5] | |
| Suction bottle wall unit, complete with regulator, gauge, 1-quart bottle, cap and hose assembly | 4 |
| Suction regulator, intermittent, adjustable, 90–120 mm. Hg | 2 |
| **JANITORS' CLOSET** | |
| **Group I Equipment** | |
| Dispenser: | |
| Paper towel | 1 |
| Soap | 1 |
| Rack: | |
| Ladder | 1 |
| Mop handle | 1 |
| Shelf, supply | 1 |
| Sink, floor, depressed | 1 |

See footnotes at end of table.

| Intermediate care unit | Suggested quantity for unit |
|---|---|
| **JANITORS' CLOSET—Continued** | |
| **Group II Equipment** | |
| Cleaner, vacuum, wet and dry, capacity 10 gallons | 1 |
| Ladder, 2 step with rails | 1 |
| Machine, floor maintenance, 18 inches | 1 |
| Receptacle, waste | 1 |
| Truck, mopping, 2 buckets with wringer | 1 |
| **MECHANICAL EQUIPMENT ROOM** | |
| **Group I Equipment** | |
| **Group II Equipment** | — |
| **MEDICINE PREPARATION ROOM** | |
| **Group I Equipment** | |
| Cabinet, medicine with inner locked narcotic compartment | 1 |
| Counter, 36 inches high, cabinets below | 1 |
| Dispenser, paper towel | 1 |
| Light above counter | 1 |
| Rack, wall mounted, medication cards | 1 |
| Sink, medicine, in counter with gooseneck spout | 1 |
| **Group II Equipment** | |
| Can, waste, foot lever | 1 |
| Cart, utility (for medication trays) | 1 |
| Refrigerator, counter type, 4 cubic feet | 1 |
| **NOURISHMENT ROOM** | |
| **Group I Equipment** | |
| Board, bulletin, 26 x 24 inches | 1 |
| Cabinet, wall | 1 |
| Clock outlet and electric clock | 1 |
| Counter, 36 inches high, open below | 1 |
| Dispenser: | |
| Paper towel | 1 |
| Soap | 1 |
| Dumbwaiter | 1 |
| Icemaking machine | 1 |
| Intercommunication system, to kitchen | 1 |
| Nurses' calling system, audiovisual: Duty station | 1 |
| Refrigerator, above counter, 4–6 cubic feet | 1 |
| Sink in counter | 1 |
| Vertical tray conveyor | 1 |
| **Group II Equipment** | |
| Can, waste, foot lever | 1 |
| Cart, tray | 3 |
| Hot plate, electric, double element, 3 heat control, heavy duty | 1 |
| Toaster, electric, 2 slice, heavy duty | 1 |
| **NURSES' STATION** | |
| **Group I Equipment** | |
| Board, bulletin, 26 x 24 inches | 1 |
| Clock outlet and electric clock | 1 |
| Counter, 30 inches high: | |
| Drawers, kneespace and fold away typewriter shelf below | 1 |
| Open below | 1 |
| Nurses' calling system, audiovisual: Master station | 1 |
| Rack, chart, 2-way between Doctors' Charting Room | 1 |
| Station, pneumatic tube system | 1 |
| **Group II Equipment** | |
| Chair: | |
| Office, swivel without arms | 6 |
| Posture | 1 |
| File, pigeonhole for forms | 1 |
| Imprinter, patients record [6] | 1 |
| Typewriter, standard | 1 |
| **NURSES' TOILET** | |
| **Group I Equipment** | |
| Dispenser: | |
| Paper towel | 1 |
| Soap | 1 |
| Fixture, toilet paper | 1 |
| Lavatory with gooseneck spout, foot, knee or wrist control | 1 |
| Mirror above lavatory | 1 |
| Shelf above lavatory | 1 |
| Watercloset | 1 |

See footnotes at end of table.

| Intermediate care unit | Suggested quantity for unit |
|---|---|
| **NURSES' TOILET—Continued** | |
| **Group II Equipment** | |
| Can, sanitary, waste | 1 |
| **NURSES' LOCKER ROOM AND TOILET** | |
| **Locker Room** | |
| **Group I Equipment** | |
| Board, bulletin, 26 x 24 inches | 1 |
| Clock outlet and electric clock | 1 |
| Locker, clothes, steel, 15 x 18 x 60 inches | 20 |
| Mirror, full length, wall mounted | 1 |
| Nurses' calling system, audiovisual: | |
| Duty station | 1 |
| **Group II Equipment** | |
| Chair: | |
| Easy, seat and back cushions | 1 |
| Straight | 4 |
| **Toilet** | |
| **Group I Equipment** | |
| Dispenser: | |
| Paper towel | 1 |
| Soap | 1 |
| Fixture, toilet paper | 1 |
| Lavatory with gooseneck spout, wrist control | 1 |
| Mirror above lavatory | 1 |
| Shelf above lavatory | 1 |
| Watercloset | 1 |
| **Group II Equipment** | — |
| **NURSES' OFFICE** | |
| **Group I Equipment** | |
| Clock outlet and electric clock | 1 |
| **Group II Equipment** | |
| Bookcase [7] | 1 |
| Cabinet, filing, lettersize, 2 drawers | 1 |
| Chair: | |
| Office, swivel without arms | 1 |
| Straight | 1 |
| Desk, office, single pedestal | 1 |
| Lamp, desk | 1 |
| **SHOWER ROOM** | |
| **Group I Equipment** | |
| Bar, towel | 1 |
| Nurses' calling system, audiovisual: | |
| Calling station | 1 |
| Corridor signal light | 1 |
| Rail, grab | 1 |
| Receptacle, soap | 1 |
| Shower with curtain and rod | 1 |
| **Group II Equipment** | |
| Chair, straight | 1 |
| **SOILED-HOLDING ROOM** | |
| **Group I Equipment** | |
| Board, bulletin, 26 x 24 inches | 1 |
| Counter, 36 inches high, open below | 1 |
| Dispenser: | |
| Paper towel | 1 |
| Soap | 1 |
| Nurses' calling system, audiovisual: | |
| Duty station | 1 |
| Outlet, vertical conveyor | 1 |
| Sink: | |
| Clinical | 1 |
| Counter with gooseneck spout [8] | 1 |
| **Group II Equipment** | |
| Can, waste, foot lever | 1 |
| Cart, supply [9] | 2 |
| Hamper, linen | 2 |

See footnotes at end of table.

| Intermediate care unit | Suggested quantity for unit |
|---|---|
| **STRETCHER AND WHEELCHAIR ALCOVE** | |
| **Group I Equipment** | — |
| **Group II Equipment** | |
| Stretcher, wheeled | 2 |
| Wheelchair | 4 |
| **SUPPLY ROOM** | |
| **Group I Equipment** | |
| Board, bulletin, 26 x 24 inches | 1 |
| Counter, 36 inches high, open below | 1 |
| Dispenser: | |
| Paper towel | 1 |
| Soap | 1 |
| Nurses' calling system, audiovisual: | |
| Duty station | 1 |
| Outlet, vertical conveyor with ejector | 1 |
| Sink in counter, with gooseneck spout [8] | 1 |
| **Group II Equipment** | |
| Can, waste, foot lever | 1 |
| Cart: | |
| Supply [9] | 8 |
| Linen | 2 |
| **TREATMENT AND EXAMINATION ROOM** | |
| **Group I Equipment** | |
| Board, bulletin, 26 x 24 inches | 1 |
| Cabinet, wall | 1 |
| Counter, 36 inches high, open below | 1 |
| Dispenser: | |
| Paper towel | 1 |
| Soap | 1 |
| Illuminator, film, double, recessed | 1 |
| Nurses' calling system, audiovisual: | |
| Calling station | 1 |
| Corridor signal light | 1 |
| Sink, in counter with gooseneck spout and spray, foot, knee or wrist control | 1 |

See footnotes at end of table.

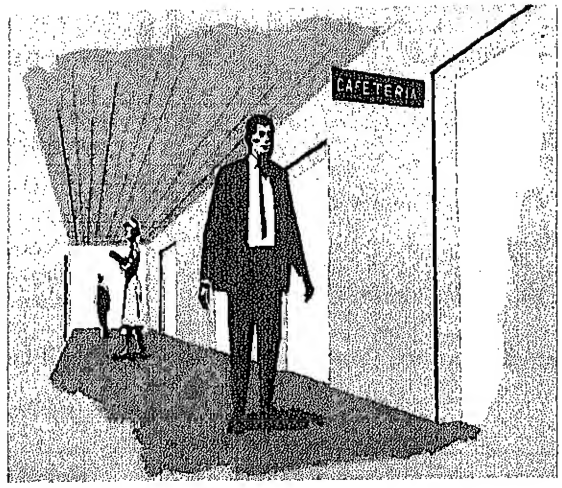
| Intermediate care unit | Suggested quantity for unit |
|---|---|
| **Group II Equipment** | |
| Can, waste, foot lever | 1 |
| Cart, utility | 1 |
| Chair, straight | 1 |
| Kick bucket | 1 |
| Light, examining | 1 |
| Scale, clinic with measuring rod | 1 |
| Stool: | |
| Foot | 1 |
| Operators, adjustable, 19–25 inches | 1 |
| Table: | |
| Examining, metal, flat top with pad | 1 |
| Instrument: | |
| 16 x 20 inches | 1 |
| Mayo | 1 |
| **WAITING ROOM** | |
| **Group I Equipment** | |
| Clock outlet and electric clock | 1 |
| **Group II Equipment** | — |
| Chair: | |
| Easy, seat and back cushions | 3 |
| Office, swivel without arms | 1 |
| Desk, office, single pedestal | 1 |
| **TELEPHONE BOOTH** | |
| **Group I Equipment** | |
| Shelf | 1 |
| **Group II Equipment** | |
| **MEN'S TOILET** | |
| **Group I Equipment** | |
| Dispenser: | |
| Paper towel | 1 |
| Soap | 1 |
| Fixture, toilet paper | 1 |

| Intermediate care unit | Suggested quantity for unit |
|---|---|
| **MEN'S TOILET—Continued** | |
| **Group I Equipment—Continued** | |
| Lavatory | 1 |
| Mirror above lavatory | 1 |
| Shelf above lavatory | 1 |
| Watercloset | 1 |
| **Group II Equipment** | — |

| Intermediate care unit | Suggested quantity for unit |
|---|---|
| **WOMEN'S TOILET** | |
| **Group I Equipment** | |
| Dispenser: | |
| Paper towel | 1 |
| Soap | 1 |
| Fixture, toilet paper | 1 |
| Lavatory | 1 |
| Mirror above lavatory | 1 |
| Shelf above lavatory | 1 |
| Watercloset | 1 |
| **Group II Equipment** | |
| Can, sanitary, waste | 1 |

[1] To provide flexibility, a number of 2-bed rooms adjacent to the intensive care unit will require outlets for each bed.
[2] Extra-length beds also available.
[3] Foot or knee control required for isolation technic.
[4] Additional Group II equipment available from Central Sterilizing and Supply, as required.
[5] Must fit installed wall unit.
[6] If imprinting machine is used.
[7] Built-in shelves may be preferred.
[8] Foot, knee, or wrist control preferred.
[9] Technic determines number needed.

# *Part III—Self-Care*




## SELECTION OF PATIENTS

Ambulatory patients who are convalescing or require diagnosis or therapy may be cared for in this unit. Examples of self-care patients include the physically self-sufficient requiring diagnostic study not feasible on an outpatient or office basis; the patient requiring daily or more frequent specialized treatment such as radiation or physical therapy; the new diabetic who requires precise dietary management, frequent laboratory tests, and adjustment of insulin dosage, as well as instruction on diet and self-administration of insulin; the postcoronary patient who must learn, under close supervision, how much activity he can tolerate; the convalescent rectal carcinoma patient who needs a few more days help in bowel training and colostomy management; and the patient with a mild emotional disturbance.

## SERVICES REQUIRED

Patients must be ambulant; therefore, services provided are chiefly educational and supervisory, as suggested by the above examples. The medical, nursing, and dietary staffs instruct patients on how to meet most of their own needs, including, for example, taking medication, selecting their diets, or taking simple treatments.

The nurse is responsible for arranging the patient's schedule and for seeing that he understands what to do. She can teach good health practices and plan for health maintenance in the home. She works closely with the physician to give the patient emotional support as well as the specific information he needs to learn to accept his diagnosis or the limitations imposed by his illness, if it is one like diabetes or coronary disease, which he will have to live with indefinitely. Such counseling helps ease the transition from hospital to home.

## NURSING PERSONNEL

*Selection.*—The professional nurse on this unit will have a minimum of technical procedures to perform, but her human relations skills may be used to the maximum in counseling, teaching, and providing emotional support. Skills in these areas and knowledge of good public health practices and of the community's health resources should be given high priority in selecting the nursing staff for the self-care unit.

*Staffing.*—This unit's staffing requirements will depend on the services to be provided and on the patient census. In one hospital where the average number of patients in the unit is 26, the following pattern has been found adequate: 1 professional nurse plus 1 licensed practical nurse or nurse's aide for the day shift; 1 full-time professional nurse plus 1 part-time staff member (either licensed practical nurse or nurse's aide) for the evening shift; and either a full-time professional nurse or a licensed practical nurse

for the night shift. A clerk could be assigned to this unit to assist in arranging patients' schedules and to remind them of appointments.

## OPERATIONAL ASPECTS

*General.*—Patients should be permitted so far as possible to follow a homelike routine, with no fixed bedtime or arising hours except as may be required by appointments for diagnostic or therapeutic procedures. There should be no need to restrict either children or adults as visitors, or to limit visiting hours.

*Admissions.*—Patients may be admitted here directly from the admitting office or they may be transferred from some other patient unit. Among the direct admissions are those to undergo surgery. Such patients will have an opportunity to learn of hospital procedures and routine and what is expected of them. Those sent here preparatory to discharge should receive instructions concerning their followup care. The length of stay may be influenced by the home situation to be faced by the patient and the distance and ease of transportation between the home and hospital. Those admitted to undergo diagnosis should take the responsibility for getting to X-ray and laboratory on time and for coming to the nurse for medications.

*Locating patients*—Since patients are not restricted to their rooms, a system should be developed which would keep the staff advised at all times as to where they might be located. One way of handling this is by having a dial on each door which indicates such areas as X-ray, laboratory, lounge, cafeteria, shower, treatment room, or another patient's room. When the patient leaves his room, he turns the dial to the correct position. Other indicators on the dial should show whether the patient is free for visitors or whether he wishes to sleep.

*Dietary practices.*—One of the major functions of the dietary department for the self-care patient is to aid him through nutrition education to adjust to his home environment. Here the general hospital cafeteria can serve as a tool by enabling the dietitian to provide instruction and assistance to the patient as he goes through the cafeteria line. A nutrition education training program can be developed by a teaching dietitian for patients requiring instructions on modified diets, for food service personnel engaged in serving and checking trays, and for food service supervisors assigned to assist ambulant patients in the cafeteria line.

A minimal dietary facility is desirable on this unit for preparation of a light breakfast and between-meal snack. Adjoining this facility should be a small area for dining. Patients may use the hospital cafeteria for meals.

## DESIGN AND EQUIPMENT

The self-care unit should be located convenient to diagnostic facilities, the dining room or cafeteria, and to the main hospital entrance.

Single-bed rooms with private toilets appear to be preferable for the self-care units, although two-bed rooms would reduce construction costs. Some type of physical separation of this unit from the main hospital may be desirable to help create a homelike atmosphere.

In an existing hospital, self-care patients can be accommodated in the conventional unit without much difficulty, although the use of four-bed rooms and two-bed rooms clashes with the desire for privacy reported by most of the patients in this category. The existing dayroom may be used as the social area and other existing spaces can readily be adapted to the functions of a self-care unit.

Since an ambulant patient is likely to spend less time in his room than a bed patient, the room can be of minimal size. In addition to the bed, there should be a small desk and chair, a desk lamp, a floor lamp, an easy chair, bedside table, luggage rack, and a clothes closet. There should be a nurses' call connection to the nurses' station, with a dome light over the door of the patient's room. A private toilet room with a lavatory is preferred because of the frequent need for obtaining specimens and for preparation for diagnostic procedures. Room finishes should be easily maintainable; cheerful colors should be used and there should be ample window space.

Central shower and bath facilities should be provided. A ratio of one shower for each 4 beds and one tub for each 8 beds appears to be satisfactory, pending further experience.

A *nurses' station* should overlook the social recreation area. The station can be minimal in size with glazed partitions to permit easy supervision of the adjoining areas. A head nurses' office and a nurses' toilet should be provided.

The furniture can consist of a charting desk and chairs, and possibly filing cabinets. A medication preparation room should adjoin.

The *examination room* can be a multipurpose area for use by physician and chaplain. The examination area should be provided a cubicle curtain and contain an examination table and lavatory. The furniture for the consulting area should include a

small desk and chair, and one or two straight-back chairs.

Minimal supply and *soiled-holding* (utility) rooms are needed. A sink in a counter is required. Storage cabinets are not recommended if supplies can be kept on carts. A dome light and a buzzer connected with the nurses' call system are required.

The *conference-demonstration* room provides a private area where patients can be taught self-treatment. This room will require a sink in a counter with storage cabinets and drawers below, wall cabinets above, chairs, and a work or conference table. A dome light and buzzer are also needed.

Provision for *social recreation facilities* for the patient on the self-care unit is important. These facilities can take various forms, but basically the following spaces should be included:

- A *dayroom* containing sofas, easy chairs, good reading lamps, end tables, and a television receiver.
- A *nourishment* room with minimal facilities may adjoin the living area for preparation of between-meal snacks. Tables in this area can also be used for card sessions.
- A *storage closet* for games and recreational equipment.
- *Toilet facilities* for visitors.
- A *sitting room* for use by small groups.
- A *public telephone booth.*
- A *janitor's closet.*

Linen carts and a wheelchair can be kept in the supply room.

The corridor width need not be greater than 7 feet. Cheerful colors are recommended.

*Ventilation and air conditioning.*—The air-conditioning system will preferably conform to the recommendations for the intermediate care unit. However, a central recirculation system is considered adequate for this unit if it is equipped with filters having not less than 90 percent efficiency in the retention of particulates in the 1- to 5-micron size range. These filters should be preceded in the system by a medium-grade filter to prolong the life of the more efficient filter. The air of the examination and treatment room and the soiled-holding room should not be recirculated. All rooms should be under slightly negative air pressure relative to the air pressure of the corridor.

Temperature of 75° F. and 40 percent relative humidity should be maintained at all times within the unit. The following ventilation rates should be provided:

*Dayroom, sitting room, treatment room, and soiled holding room:* The equivalent of four-room-volumes of air per hour.

*Patient rooms:* The equivalent of two-room-volumes of air per hour.

## EQUIPMENT LIST

An equipment list for the self-care unit is presented below. For an explanation of equipment classifications (Groups I–III), see appendix A.

| Self-care unit | Suggested quantity | Self-care unit | Suggested quantity |
|---|---|---|---|
| **1-BED ROOM** | | | |
| **Group I Equipment** | | | |
| Blinds, window | | Desk, writing | 1 |
| Closet, clothes with drawers | 1 | Lamp, floor | 1 |
| Nurses' calling system, audiovisual: | | Lamp, table | 1 |
| Calling station | 1 | Mattress, bed | 1 |
| Corridor signal light | 1 | Table, bedside | 1 |
| Outlet, electric, grounding type, duplex (1 near floor) | 2 | **Toilet** | |
| **Group II Equipment** | | **Group I Equipment** | |
| Bed, dormitory type | 1 | Dispenser: | |
| Cabinet, bedside | 1 | Paper towel | 1 |
| Chair: | | Soap | 1 |
| Easy, seat and back cushions | 1 | Fixture, toilet paper | 1 |
| Straight, patient's room | 1 | | |

| Self-care unit | Suggested quantity |
|---|---|
| **1-BED ROOM—Continued** | |
| **Group I Equipment—Continued** | |
| Lavatory with gooseneck spout, wrist control | 1 |
| Mirror above lavatory | 1 |
| Nurses' calling system: | |
| Calling station | 1 |
| Shelf above lavatory | 1 |
| Watercloset | 1 |
| **Group II Equipment** | — |
| **BATHROOM** | |
| **Group I Equipment** | |
| Bar, towel | 1 |
| Bathtub | 1 |
| Dispenser: | |
| Paper towel | 1 |
| Soap | 1 |
| Fixture, toilet paper | 1 |
| Lavatory | 1 |
| Mirror above lavatory | 1 |
| Nurses' calling system: | |
| Calling station | 1 |
| Corridor signal light | 1 |
| Rail, grab | 1 |
| Receptacle, soap | 1 |
| Shelf above lavatory | 1 |
| Watercloset | 1 |
| **Group II Equipment** | |
| Chair, straight | 1 |
| **CONFERENCE AND DEMONSTRATION ROOM** | |
| **Group I Equipment** | |
| Board, bulletin, 26 x 24 inches | 1 |
| Cabinet, wall | 1 |
| Clock outlet and electric clock | 1 |
| Screen, projection, wall mounted, roll type | 1 |
| **Group II Equipment** | |
| Board, chalk, portable, 4 x 8 feet | 1 |
| Chair, office, arm | 6 |
| Table, conference | 1 |

| Self-care unit | Suggested quantity |
|---|---|
| **CORRIDOR** | |
| **Group I Equipment** | |
| Water cooler, recessed | 2 |
| **Group II Equipment** | — |
| **DAYROOM** | |
| **Group I Equipment** | |
| Blinds, window | |
| Clock outlet and electric clock | 1 |
| Nurses' calling system: | |
| Calling station | 1 |
| Corridor signal light | 1 |
| **Group II Equipment** | |
| Chair: | |
| Arm | 4 |
| Desk | 1 |
| Dining with arms | 12 |
| Easy, seat and back cushions | 7 |
| Desk, writing | 1 |
| Lamp: | |
| Desk | 1 |
| Floor | 3 |
| Table | 2 |
| Rack, magazine | 1 |
| Sofa, 3 passenger | 3 |
| Table: | |
| Dining, 36 x 36 inches [1] | 3 |
| End | 6 |
| Occasional | 1 |
| Television and/or radio | 1 |
| **JANITORS' CLOSET** | |
| **Group I Equipment** | |
| Dispenser: | |
| Paper towel | 1 |
| Soap | 1 |
| Rack: | |
| Ladder | 1 |
| Mop handle | 1 |
| Shelf, supply | 1 |
| Sink, depressed, floor | 1 |
| **Group II Equipment** | |
| Ladder, 2 step with rails | 1 |
| Receptacle, waste | 1 |
| Truck, mopping, 2 buckets with wringer | 1 |

See footnotes at end of table.

| Self-care unit | Suggested quantity |
|---|---|
| **MEDICINE PREPARATION ROOM** | |
| **Group I Equipment** | |
| Cabinet, medicine, with inner locked narcotic compartment | 1 |
| Counter, 36 inches high, cabinets below | 1 |
| Dispenser, paper towel | 1 |
| Light above counter | 1 |
| Rack, wall mounted, medication cards | 1 |
| Sink, medicine, in counter with gooseneck spout | 1 |
| **Group II Equipment** | |
| Can, waste, foot lever | 1 |
| Cart, utility, for medication trays | 1 |
| Refrigerator, counter type, 4 cubic feet | 1 |
| **NOURISHMENT ROOM** | |
| **Group I Equipment** | |
| Board, bulletin, 26 x 24 inches | 1 |
| Cabinet, wall | 1 |
| Clock outlet and electric clock | 1 |
| Counter, 36 inches high, open below | 1 |
| Dispenser: | |
| Paper towel | 1 |
| Soap | 1 |
| Intercommunication system, to kitchen | 1 |
| Nurses' calling system: | |
| Duty station | 1 |
| Refrigerator, above counter, 4–6 cubic feet | 1 |
| Sink in counter | 1 |
| **Group II Equipment** | |
| Can, waste, foot lever | 1 |
| Cart, utility | 1 |
| Hotplate, electric, double element, 3 heat control, heavy duty | 1 |
| Toaster, electric, 2 slice, heavy duty | 1 |
| **NURSES' OFFICE** | |
| **Group I Equipment** | |
| Clock outlet and electric clock | 1 |
| **Group II Equipment** | |
| Bookcase [2] | 1 |
| Cabinet, filing, letter size, 2 drawer | 1 |
| Chair: | |
| Office, swivel with arms | 1 |
| Straight | 2 |
| Desk, office, single pedestal | 1 |
| Lamp, desk | 1 |
| **NURSES' STATION** | |
| **Group I Equipment** | |
| Board, bulletin, 26 x 24 inches | 1 |
| Clock outlet and electric clock | 1 |
| Counter, 30 inches high, drawers, kneespace and foldaway typewriter shelf below | 1 |
| Nurses' calling system, audiovisual: | |
| Master station | 1 |
| Rack, chart, capacity 36 charts | 1 |
| Station, pneumatic tube system | 1 |
| **Group II Equipment** | |
| Chair, office, swivel without arms | 2 |
| File, pigeonhole for forms | 1 |
| Typewriter, standard | 1 |
| **NURSES' TOILET** | |
| **Group I Equipment** | |
| Dispenser: | |
| Paper towel | 1 |
| Soap | 1 |
| Fixture, toilet paper | 1 |
| Lavatory with wrist control | 1 |
| Mirror above lavatory | 1 |
| Shelf above lavatory | 1 |
| Watercloset | 1 |
| **Group II Equipment** | |
| Can, sanitary, waste | 1 |

See footnotes at end of table.

| Self-care unit | Suggested quantity |
|---|---|
| **SHOWER ROOM** | |
| **Group I Equipment** | |
| Bar, towel | 1 |
| Nurses' calling system, audiovisual: | |
| Calling station | 1 |
| Corridor signal light | 1 |
| Receptacle, soap | 1 |
| Shower and dressing compartment with curtain and rod | 1 |
| **Group II Equipment** | |
| Chair, straight | 1 |
| **SITTING ROOM** | |
| **Group I Equipment** | |
| Blinds, window | |
| Clock outlet and electric clock | 1 |
| Nurses' calling system: | |
| Calling station | 1 |
| Corridor signal light | 1 |
| **Group II Equipment** | |
| Bookcase [2] | 1 |
| Chair: | |
| Desk | 1 |
| Easy, seat and back cushions | 3 |
| Desk, writing | 1 |
| Lamp: | |
| Desk | 1 |
| Floor | 3 |
| Table | 2 |
| Sofa, 3 passenger | 1 |
| Table: | |
| End | 2 |
| Occasional | 1 |
| **SOILED-HOLDING ROOM** | |
| **Group I Equipment** | |
| Board, bulletin, 26 x 24 inches | 1 |
| Counter, 36 inches high, open below | 1 |
| Dispenser: | |
| Paper towel | 1 |
| Soap | 1 |
| Nurses' calling system: | |
| Duty station | 1 |
| Shelf above sink | 1 |
| Sink in counter, gooseneck spout [3] | 1 |
| **Group II Equipment** | |
| Can, waste, foot lever | 1 |
| Cart, supply [4] | 1 |
| Hamper, linen | 2 |
| **SUPPLY ROOM** | |
| **Group I Equipment** | |
| Board, bulletin, 26 x 24 inches | 1 |
| Counter, 36 inches high, open below | 1 |
| Dispenser: | |
| Paper towel | 1 |
| Soap | 1 |
| Nurses' calling system: | |
| Duty station | 1 |
| Sink, in counter with gooseneck spout [3] | 1 |
| **Group II Equipment** | |
| Can, waste, foot lever | 1 |
| Cart, supply [4] | 3 |
| Wheelchair | 1 |
| **TREATMENT AND EXAMINATION ROOM** | |
| **Group I Equipment** | |
| Board, bulletin, 26 x 24 inches | 1 |
| Cabinet, wall | 1 |
| Curtain, floor to ceiling and track | 1 |
| Dispenser: | |
| Paper towel | 1 |
| Soap | 1 |
| Illuminator, film, double, recessed | 1 |
| Nurses' calling system: | |
| Calling station | 1 |
| Corridor signal light | 1 |
| Duty station | 1 |
| Sink, in counter with gooseneck spout [3] | 1 |

See footnotes at end of table.

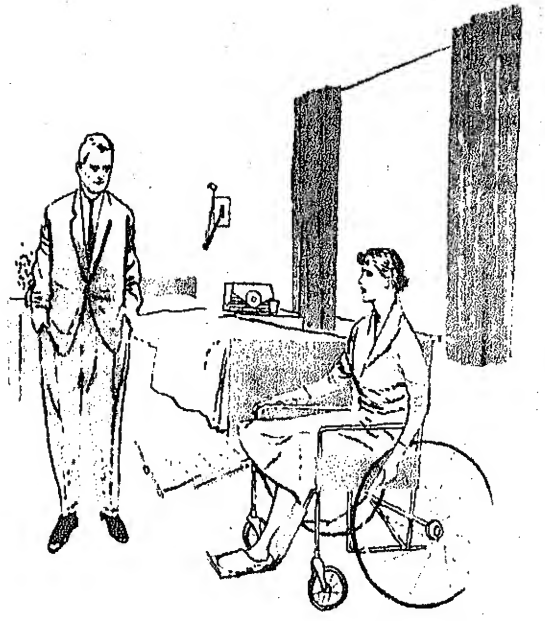
| Self-care unit | Suggested quantity |
|---|---|
| **TREATMENT AND EXAMINATION ROOM—Con.** | |
| **Group II Equipment** | |
| Can, waste, foot lever | 1 |
| Cart, utility | 1 |
| Chair: | |
| Office, swivel without arms | |
| Straight | 1 |
| Desk, office, single pedestal | 1 |
| Light, examining | 1 |
| Ophthalmoscope-otoscope, combination set | 1 |
| Scale, clinic with measuring rod | 1 |
| Sigmoidoscope | 1 |
| Sphygmomanometer | 1 |
| Stool: | |
| Foot | 1 |
| Operators, adjustable, 19–25 inches | 1 |
| Table: | |
| Examining, metal, flat top with pad | 1 |
| Instrument: | |
| 16 x 20 inches | 1 |
| Mayo | 1 |

[1] May be folding type.
[2] Built-in shelves may be preferred.

| Self-care unit | Suggested quantity |
|---|---|
| **TOILET** | |
| **Group I Equipment** | |
| Dispenser: | |
| Paper towel | 1 |
| Soap | 1 |
| Fixture, toilet paper | 1 |
| Lavatory | 1 |
| Mirror above lavatory | 1 |
| Shelf above lavatory | 1 |
| Watercloset | 1 |
| **Group II Equipment** | — |

[3] Foot, knee, or wrist control preferred.
[4] Technic determines number needed.

# *Part IV— Long-Term Care*



To achieve its maximum potential, the long-term care unit will provide services to certain patients now cared for in the general hospital, in nursing homes, or in their own homes and who would benefit by care in a hospital environment. Before making a decision regarding the establishment of a long-term care unit, therefore, consideration should be given to the following:

- Assessment of the hospital and community needs for such a unit. This would mean estimating the number of patients in hospitals and other institutions, on waiting lists, attending clinics, and at home, who could benefit by such a program, and evaluation of the existing community resources for serving these patients, including other general hospitals, convalescent facilities, nursing homes, and homes for the aged;
- Assessment of the availability in the hospital of special services for the chronically ill; e.g., physical therapy, rehabilitation, and occupational therapy;
- Review of the case histories of previous years to determine the characteristics of patients discharged, length of stay, age, and diagnosis.
- The policies to be established regarding admission of patients to this unit; and
- The functions to be provided by this unit.

Once the assessments have been made, the need for the establishment of a long-term care unit can be determined.

## SELECTION OF PATIENTS

Patients assigned to this unit require the type of medical and related services which can best be provided in a hospital setting. Moreover, they are expected to require these services for a prolonged period.

Patients may enter the unit by transfer from the intermediate care unit when it is evident that the convalescence will be a long one, or they may be admitted from outside the hospital for a course of restorative or rehabilitative treatment of considerable duration. Examples include: a diabetic amputee whose wound is healed and who needs diabetic regulation, fitting of a prosthesis and learning how to walk with it, as well as how to care for his remaining foot; a patient with severe arthritis who cannot be cared for at home and who, with a combination of good medical management and skilled physical and occupational therapy, has a prospect of improvement in comfort and in activities of daily living; an accident victim in a body cast who requires maximum assistance such as turning and feeding, but who has passed the acute phase when intensive care was required.

## SERVICES REQUIRED

Patients on this unit will range from those with a poor prognosis for survival but a need for skilled palliative treatment, to those with long-term potential for full restoration of function. Skilled

medical supervision is needed with special interest in geriatrics, orthopedics, and rehabilitation.

With long-term patients it is especially desirable and it should be possible to encourage a relatively permissive attitude to prevail with maximum consideration for the patient's preferences toward scheduling of treatments and other routines. Except for procedures that must be carried out in other departments (such as physical therapy, occupational therapy, or X-ray), the routine procedures need not be provided on a rigid schedule. Patients should be allowed certain freedom about the hour for going to bed and there should be no need to awaken them at an unreasonably early hour in the morning. Cooperative planning embodying flexibility in scheduling care will make for more contented patients. Personnel also will feel greater satisfaction in meeting patient needs.

There may be time-consuming treatments such as constant wet dressings or the frequent turning of a patient in a body cast. Many patients will need assistance in transferring from bed to chair or stretcher, or they may need help with braces. Part of the rehabilitation plan should be to help these patients help themselves, even though this takes considerable time. Many patients will need assistance with eating as well as with many aspects of personal care.

The assistance of a diversional, recreational therapist and of hospital volunteers may be of value in maintaining morale and motivation toward recovery.

This unit may have to be home for the patient with a lingering illness and the need for emotional support will be paramount. Many of these patients will need to be encouraged to get out of bed as long as they are able. The bedridden will require extra attention in respect to personal hygiene, and every means of comfort, both mental and physical, should be provided.

## NURSING PERSONNEL

*Selection.*—Activities on this unit frequently must be carried out at a slow pace, since it takes time to help patients help themselves during the rehabilitation process. Nurses should be individuals who do not become discouraged by the slow progress of their patients.

Emphasis should be placed on the patient's total needs—medical, social, personal, and psychological. The nursing staff, therefore, must be prepared to apply nursing in its broadest sense. The wide variety of skills required of the nurse will also be an aid to her in educating, assisting, and motivating patients to learn to help themselves.

Practices recommended for the administration of economical and the most effective nursing services for this unit include team nursing, inservice training of personnel, and participation at conferences held for the evaluation of patients' medical care needs.

*Staffing.*—The proportion of patients requiring complete physical care (i.e., a patient in a body cast or a cerebrovascular accident patient who is incontinent) on this unit may vary greatly from hospital to hospital and will, of course, affect the staffing needs. On the average, the following pattern has been found adequate: one nurse for three patients on the day shift; one nurse for four patients in the evenings; and one nurse for five patients at night. Nursing personnel may include a professional nurse, a licensed practical nurse, or nurses' aides, however, among those serving on each shift at least one should be a professional nurse.

## OPERATIONAL ASPECTS

*Classification.*—Patients on this unit, as they progress, may become candidates for the self-care unit, as a step toward discharge, or for transfer to the home care program. A patient may also need the services of the intermediate care unit because of a relapse or intercurrent illness, or even require transfer to intensive care because of a critical illness or a major operation. Regular periodic assessment of the patient's condition and needs, therefore, must not be overlooked. The staff should be on the alert for situations where the patient is medically ready to go home or be transferred to a skilled nursing home, but cannot do so because of unsatisfactory home conditions or lack of needed community facilities and services. The social service worker may be of help in these situations.

*Dietary practices.*—Group feeding rather than the traditional bedside tray service is the unique feature of dietary practices on this unit.

A group food service program established for long-term patients has a distinct therapeutic value, one which can more fully meet the needs of the individual patient. It will serve to minimize any physical weakness or insecurity and will make the patient more self-reliant and less inclined to depend on institutional service. Provision should be made for catering to the food preferences of individual patients.

In planning for the dietary service here, a minimal nourishment facility with a dining room should be provided to meet the simple dietary requests.

Since many of the patients using the dining room in the unit may be in wheelchairs, a number of adjust-

able pedestal-type dining tables should be provided to accommodate these patients. Chairs should also be provided for personnel who assist in patient-feeding.

The patients' mealtime activity is supervised by personnel specially trained to help the chronically ill patient. A separate dining room or area on the unit will provide an opportunity for patients to participate in communal activities and to regain their normal daily living patterns, thus aiding their total recovery. For those patients who are bedfast, provision must be made for traditional bedside tray service.

## DESIGN AND EQUIPMENT

Optimum size for the long-term care unit may be as many as 35 to 40 beds. The unit may be located anywhere in the hospital, but a ground floor is recommended to encourage outdoor recreation whenever applicable.

In an existing hospital, long-term care patients can be housed in the conventional patient care unit. However, modifications to existing space are required to provide dining rooms, dayrooms, and training toilets.

*Bedrooms* should be large enough to permit patients to move freely on wheelchairs, crutches, canes, or walkers. In general, they should not contain more than two beds, although in some instances a number of four-bed rooms may be advisable. A few single rooms should be provided. A type of plan for the two-bed room which permits placing each bed at a window is recommended.

Room areas should not be less than 100 square feet per bed in multibed rooms and 125 square feet in single rooms. Beds should be at least 4 feet apart, and a minimum clearence of at least 3 feet should be maintained between the beds and adjacent walls, wardrobes, or other equipment. A minimum of 5 feet between bed ends should be provided.

Provision of toilets adjacent to each patient's room is recommended for the convenience of both patients and staff. Otherwise, the rooms should generally follow the description presented in the publication "Planning and Equipping the Nursing Home."*

Training toilets and shower and bath facilities are needed. They must be outsized for the requirements of this type of patient.

Generous provisions for day space and dining space are recommended to encourage early ambulation.

Toilet, bathrooms, and recreational facilities should be planned in accordance with the proposals presented in "Planning Multiple Disability Rehabilitation Facilities."*

The usual complement of ancillary facilities required include: nurses' station with adjacent medication preparation room, supply room, soiled-holding (utility) room, treatment room, janitor's closet, storage closet, and stretcher and wheelchair storage.

Finishes, fire exits, fire-resistive construction, and corridor widths should follow recommendations for a rehabilitation patient care unit.

*Equipment features.*—The equipment required for this unit is essentially the same as for the intermediate care unit, except as modified to place special emphasis on rehabilitation and physical therapy. Standard built-in and movable hospital equipment is used in supply and treatment rooms, nurses' station, and floor pantry. Bedroom furniture is also the same, but designed to meet the patient's disabilities and enable him to be as independent physically as possible. Chairs should be provided that are comfortable for the cardiac and orthopedic patients. Desks and tables should accommodate wheelchairs. Fracture beds, portable overhead frames, and tilt tables are needed for orthopedic cases. Also, adjustable bed trapeze (patient's helpers) and foot supports should be available for patients when indicated.

Provisions should be made in several areas for patients in wheelchairs. As previously noted, a number of dining room tables should be of the pedestal type and high enough to accommodate wheelchairs. Dining room chairs with short arms assist movement. Grab rails around the toilets and bath should be built in as a special safety feature. An equipment storage area is required for such items as wheelchairs, tilt tables, crutches, canes, walkers, and other self-help devices; Stryker frames; traction apparatus; patient lifters; folding bed cradles; and deodorizers.

*Ventilation and air conditioning.*—The ventilation and air-conditioning system for this unit should preferably be the type recommended for the intermediate care unit. This type of system which confines the air to a particular room will be especially helpful in controlling odors which are not uncommon to these units. Treatment rooms, conference rooms,

* Available from the Public Health Service, Washington 25, D.C.

and soiled-holding rooms will be treated as previously described for other units.

Because of the advanced age groups and the types of infirmities treated in this unit, a temperature of 75° F. and relative humidity of 35 percent are recommended. A ventilation rate of the equivalent of three room-volumes of air per hour is recommended for patient rooms.

If a central recirculation system is contemplated, provision of a high-efficiency filter system, such as previously described for other units, will be required.

## EQUIPMENT LIST

An equipment list for a long-term care unit is presented below. For an explanation of equipment classification (Groups I–III), see appendix A.

| Long-term care unit | Suggested quantity | |
|---|---|---|
| | 1-bed room | 2-bed room |
| **BEDROOMS** | | |
| **Group I Equipment** | | |
| Blinds, window | | |
| Closet, clothes with drawers | 1 | 1 |
| Cubicle, curtain and track | — | 2 |
| Nurses' calling system, audiovisual: | | |
| Calling station | 1 | 1 |
| Corridor signal light | 1 | 1 |
| Outlet: | | |
| Central piped system: | | |
| Oxygen | 1 | 1 |
| Vacuum (suction) | 1 | 1 |
| Electric, grounding type, duplex (1 near floor) | 2 | 4 |
| **Group II Equipment** | | |
| Bed, Gatch spring, standard size, adjustable height [1] | 1 | 2 |
| Bed sides, safety, adjustable, pair | 1 | 2 |
| Cabinet, bedside | 1 | 2 |
| Chair: | | |
| Easy, seat and back cushions | 1 | 1 |
| Straight, patients' room | 1 | 2 |
| Lamp, floor | 1 | 2 |
| Light, bed | 1 | 2 |
| Mattress, bed | 1 | 2 |
| Table, overbed | 1 | 2 |
| **Toilet** | | |
| **Group I Equipment** | | |
| Dispenser: | | |
| Paper towel | 1 | 1 |
| Soap | 1 | 1 |
| Fixture, toilet paper | 1 | 1 |
| Lavatory with gooseneck spout, wrist control [2] | 1 | 1 |
| Mirror above lavatory | 1 | 1 |
| Nurses' calling system, audiovisual: | | |
| Calling station | 1 | 1 |
| Rail, grab | 1 | 1 |
| Shelf above lavatory | 1 | 1 |
| Watercloset | 1 | 1 |
| **Group II Equipment** | — | — |

| Long-term care unit | Suggested quantity for unit |
|---|---|
| **BATHROOM** | |
| **Group I Equipment** | |
| Bar, towel | 1 |
| Bathtub | 1 |
| Nurses' calling system, audiovisual: | |
| Calling station | 1 |
| Corridor signal light | 1 |
| Rail, grab | 1 |
| Receptacle, soap | 1 |
| **Group II Equipment** | |
| Chair, straight | 1 |
| **CONFERENCE ROOM** | |
| **Group I Equipment** | |
| Board, bulletin, 26 x 24 inches | 1 |
| Cabinet, wall | 1 |
| Clock outlet and electric clock | 1 |
| Screen, projection, wall mounted, roll type | 1 |

See footnotes at end of table.

| Long-term care unit | Suggested quantity for unit |
|---|---|
| **CONFERENCE ROOM—Continued** | |
| **Group II Equipment** | |
| Board, chalk, portable, 4 x 8 feet | 1 |
| Chair, office, arm | 6 |
| Table, conference | 1 |
| **CORRIDOR** | |
| **Group I Equipment** | |
| Water cooler, recessed | 2 |
| **Group II Equipment** | — |
| **DAYROOM** | |
| **Group I Equipment** | |
| Blinds, window | |
| Clock outlet and electric clock | 1 |
| Nurses' calling system, audiovisual: | |
| Calling station | 1 |
| Corridor signal light | 1 |
| **Group II Equipment** | |
| Chair: | |
| Arm | 4 |
| Desk | 2 |
| Easy, seat and back cushions | 10 |
| Desk, writing | 2 |
| Lamp: | |
| Desk | 2 |
| Floor | 4 |
| Table | 4 |
| Rack, magazine | 2 |
| Table: | |
| End | 4 |
| Occasional | 2 |
| Television and/or radio | 2 |
| **DINING ROOM** | |
| **Group I Equipment** | |
| Blinds, window | |
| Clock outlet and electric clock | 1 |
| Nurses' calling system, audiovisual: | |
| Calling station | 1 |
| Corridor signal light | 1 |
| **Group II Equipment** | |
| Chair, dining with short arms | 12 |
| Table, dining, 36 x 36 inches [3] | 3 |
| **NOURISHMENT ROOM** | |
| **Group I Equipment** | |
| Cabinet, wall | 1 |
| Counter, 36 inches high | 1 |
| Sink in counter | 1 |
| **Group II Equipment** | |
| Hotplate, electric, double element, 3 heat control, heavy duty | 1 |
| Toaster, electric, 2 slice, heavy duty | 1 |
| **EQUIPMENT STORAGE ROOM** | |
| **Group I Equipment** | |
| Shelving | |
| **Group II Equipment** [4] | |
| Bed, orthopedic | 1 |
| Board, bed | 3 |
| Commode, wheelchair with removable arms | 2 |
| Cradle, bed: | |
| Arm or leg size | 2 |
| Body size | 2 |
| Deodorizer, electric | 2 |
| Frame: | |
| Balkan | 1 |
| Bradford | 1 |
| Overhead, portable | 2 |
| Patient, turning | 1 |
| Lifter, patient | 1 |
| Oxygen accessories for central piped system: [5] | |
| Flowmeter, complete with adapter and hose nipple outlet | 4 |
| Humidifier | 4 |
| Pad, mattress, alternating pressure point | 1 |
| Support, foot, adjustable | 6 |
| Table, tilt | 4 |
| Trapeze, bed, adjustable | 6 |
| Walker, invalid | 4 |

See footnotes at end of table.

| Long-term care unit | Suggested quantity for unit |
|---|---|
| **EQUIPMENT STORAGE ROOM—Continued** | |
| **Group II Equipment** | |
| Vacuum (suction) accessories for central piped system: [5] | |
| Suction bottle wall unit, complete with regulator, gauge, 1-quart bottle, cap and hose assembly | 4 |
| Suction regulator, intermittent, adjustable, 90–120 mm. Hg | 2 |
| **JANITORS' CLOSET** | |
| **Group I Equipment** | |
| Dispenser: | |
| Paper towel | 1 |
| Soap | 1 |
| Rack: | |
| Ladder | 1 |
| Mop handle | 1 |
| Shelf, supply | 1 |
| Sink, depressed, floor | 1 |
| **Group II Equipment** | |
| Ladder, 2 step with rails | 1 |
| Receptacle, waste | 1 |
| Truck, mopping, 2 buckets with wringer | 1 |
| **MEDICINE PREPARATION ROOM** | |
| **Group I Equipment** | |
| Cabinet, medicine with inner locked narcotic compartment | 1 |
| Counter, 36 inches high, cabinets below | 1 |
| Dispenser: | |
| Paper towel | 1 |
| Soap | 1 |
| Light above counter | 1 |
| Rack, wall mounted, medication cards | 1 |
| Sink, medicine, in counter with gooseneck spout | 1 |
| **Group II Equipment** | |
| Can, waste, foot lever | 1 |
| Cart, utility | 1 |
| Refrigerator, counter type, 4 cubic feet | 1 |

| Long-term care unit | Suggested quantity for unit |
|---|---|
| **NURSES' OFFICE** | |
| **Group I Equipment** | |
| Clock outlet and electric clock | 1 |
| **Group II Equipment** | |
| Bookcase [6] | 1 |
| Cabinet, filing, letter size, 2 drawer | 1 |
| Chair: | |
| Office, swivel with arms | 1 |
| Straight | 2 |
| Desk, office, single pedestal | 1 |
| Lamp, desk | 1 |
| **NURSES' STATION** | |
| **Group I Equipment** | |
| Board, bulletin, 26 x 24 inches | 1 |
| Clock outlet and electric clock | 1 |
| Counter, 30 inches high, drawers, kneespace and foldaway typewriter shelf below | 1 |
| Nurses' calling system, audiovisual: | |
| Master station | 1 |
| Rack, chart, capacity 32 charts | 1 |
| Station, pneumatic tube | 1 |
| **Group II Equipment** | |
| Chair: | |
| Office, swivel without arms | 3 |
| Posture | 1 |
| File, pigeonhole for forms | 1 |
| Typewriter, standard | 1 |
| **NURSES' LOCKER ROOM AND TOILET** | |
| **Group I Equipment** | |
| Dispenser: | |
| Paper towel | 1 |
| Soap | 1 |
| Fixture, toilet paper | 1 |
| Lavatory with wrist control | 1 |
| Locker, clothes, steel, 15 x 18 x 60 inches | 5 |
| Mirror above lavatory | 1 |
| Shelf above lavatory | 1 |
| Watercloset | 1 |

See footnotes at end of table.

| Long-term care unit | Suggested quantity for unit |
|---|---|
| **NURSES' LOCKER ROOM AND TOILET—Continued** | |
| **Group II Equipment** | |
| Chair, straight | 2 |
| **SHOWER ROOM** | |
| **Group I Equipment** | |
| Bar, towel | 1 |
| Nurses' calling system, audiovisual: | |
| Calling station | 1 |
| Corridor signal light | 1 |
| Rail, grab | 1 |
| Receptacle, soap | 1 |
| Shower and dressing compartment with curtain and rod | 1 |
| **Group II Equipment** | |
| Chair, straight | 1 |
| **SOILED-HOLDING ROOM** | |
| **Group I Equipment** | |
| Board, bulletin, 26 x 24 inches | 1 |
| Counter, 36 inches high, open below | 1 |
| Dispenser: | |
| Paper towel | 1 |
| Towel | 1 |
| Nurses' calling system, audiovisual: | |
| Duty station | 1 |
| Shelf above sink | 1 |
| Sink: | |
| Clinical | 1 |
| Counter, with gooseneck spout [7] | 1 |
| **Group II Equipment** | |
| Can, waste, foot lever | 1 |
| Cart, supply [8] | 1 |
| Hamper, linen | 2 |

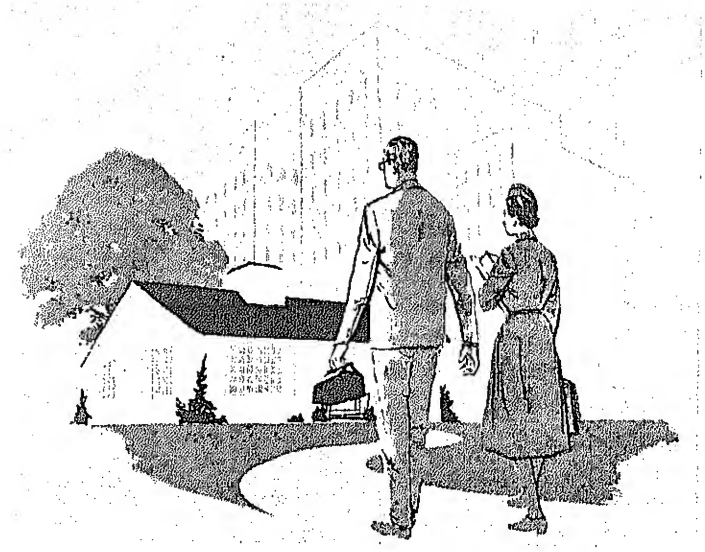
| Long-term care unit | Suggested quantity for unit |
|---|---|
| **STRETCHER AND WHEELCHAIR ALCOVE** | |
| **Group I Equipment** | — |
| **Group II Equipment** | |
| Stretcher, wheeled | 2 |
| Wheelchair | 4 |
| **SUPPLY ROOM** | |
| **Group I Equipment** | |
| Board, bulletin, 26 x 24 inches | 1 |
| Counter, 36 inches high, open below | 1 |
| Dispenser: | |
| Paper towel | 1 |
| Soap | 1 |
| Nurses' calling system, audiovisual: | |
| Duty station | 1 |
| Shelf above sink | 1 |
| Sink, in counter, gooseneck spout [7] | 1 |
| **Group II Equipment** | |
| Can, waste, foot lever | 1 |
| Cart, supply [8] | 3 |
| **TOILET** | |
| **Group I Equipment** | |
| Dispenser: | |
| Paper towel | 1 |
| Soap | 1 |
| Fixture, toilet paper | 1 |
| Lavatory, gooseneck spout | 1 |
| Mirror above lavatory | 1 |
| Nurses' calling system, audiovisual: | |
| Calling station | 1 |
| Corridor signal light | 1 |
| Rail, grab | 1 |
| Shelf above lavatory | 1 |
| Watercloset | 1 |
| **Group II Equipment** | — |

See footnotes at end of table.

| Long-term care unit | Suggested quantity for unit |
|---|---|
| **TREATMENT ROOM** | |
| **Group I Equipment** | |
| Board, bulletin, 26 x 24 inches | 1 |
| Cabinet, wall | 1 |
| Counter, 36 inches high, open below | 1 |
| Dispenser: | |
| Paper towel | 1 |
| Soap | 1 |
| Illuminator, film, double, recessed | 1 |
| Nurses' calling system, audiovisual: | |
| Calling station | 1 |
| Corridor signal light | 1 |
| Sink, in counter, foot, knee or wrist control | 1 |
| **Group II Equipment** | |
| Can, waste, foot lever | 1 |
| Cart, utility | 1 |
| Chair, straight | 1 |
| Kick bucket | 1 |
| Light, examining | 1 |
| Scale, clinic with measuring rod | 1 |
| Stool: | |
| Foot | 1 |
| Operators, adjustable, 19–25 inches | 1 |
| Table: | |
| Examining, metal, flat top with pad | 1 |
| Instrument: | |
| 16 x 20 inches | 1 |
| Mayo | 1 |

[1] Extra length beds also available.
[2] Foot or knee control may be preferred.
[3] Adjustable pedestal type recommended.
[4] Additional Group II equipment available from Central Sterilizing and Supply Facilities, as needed.
[5] Must fit installed wall outlet.
[6] Built-in shelves may be preferred.
[7] Foot, knee, or wrist control may be preferred.
[8] Technic determines number needed.

# *Part V— Home Care*



The home care program makes it possible to extend needed services to the patient after he leaves the hospital and returns to his home in the community. This is done in conjunction with selected community services which, taken together, complete the medical care plan for the patient.

In a coordinated home care program, all services for the patient are arranged for and coordinated through one central administrative agency. Usually this agency is the hospital, but it may be another community health agency such as the local health department or visiting nurse association. In any type of administrative arrangement, however, the local health department can make a major contribution in helping to coordinate services.

In 1955, a study * of a limited number of home care programs which represented several patterns of operation indicated the importance of

♦ Assessment of community need for a home care program through determination of the numbers of patients in hospitals and other institutions, on waiting lists, on clinic rosters, and an estimate of the number of homebound who could benefit from such a program.

♦ Exploration and evaluation of community resources in relation to their potential in meeting the needs of patients at home.

♦ Development of a program to include the creation of advisory committees to consult with the program director to define program objectives, and to determine the types of patients to be served, the services to be furnished, and the place where such services would de provided.

♦ Development of specific criteria for determining patient eligibility for home care.

An important step forward was taken in 1960, when five agencies joined forces to sponsor the first national Workshop on Home Care.† At the workshop, the sponsoring agencies agreed unanimously to conduct an inventory of existing coordinated home care programs.

Before proceeding with the inventory, it was necessary to develop a yardstick against which existing programs could be measured. A working definition of coordinated home care, developed by a representative committee, was presented at this national workshop and was later refined. The final

*A. M. Waterhouse, E. C. Bailey, M. C. Billis, and J. T. Palmer, *A Study of Selected Home Care Programs*, Public Health Monograph, No. 35, PHS Publication No. 447, U.S. Public Health Service, Washington 25, D.C., 1955, p. 127.

†Proceedings of Workshop on Home Care Services conducted under joint sponsorship of American Hospital Association, American Medical Association, Blue Cross Commission, Blue Shield Medical Care Plans, U.S. Public Health Service, Chicago, Ill., Apr. 20–22, 1960. (96 pp.)

definition presented at the First Regional Workshop on Home Care* is as follows:

A Coordinated Home Care Program is one that is *centrally administered*, and through *coordinated planning, evaluation* and *followup procedures*, provides for *physician-directed* medical, nursing, social, and related services to *selected patients* at home.

The term *centrally administered* emphasizes that responsibility for administration of the program be delegated to a single organization.

*Coordinated planning, evaluation, and followup* calls for the organization to maintain an operational unit to:

(1) plan and arrange for the participation of resources organized to provide for patient services including at least—physician care, nursing care, social service, and ready access to inpatient facilities.

(2) hold periodic joint conferences with physicians and other professional or allied personnel to determine medical, nursing, and social needs of all patients on the program. These needs are determined on an individual basis at the time of admission and discharge and during the course of care.

(3) coordinate individual service schedules of patients consistent with their needs and with efficient distribution and utilization of services within the total case load.

*Physician-directed* means that direction and supervision of all direct patient services (medical, nursing, social, and related) be the responsibility of the attending physician.

*Selected patients* refers to the fact that the program is primarily reserved for patients whose health needs:

(1) do not require hospitalization and cannot be met on an ambulatory or outpatient basis;

(2) require a complex of medical, nursing, social, and related services over an extended period of time; and

(3) can feasibly be met by the program in a suitable physical and psychological home environment.

As indicated previously, a home care program may be organized independently, utilizing certain hospital services by arrangement, or it may be organized as a functional unit of the hospital. Although the following discussion relates to hospital-based programs, a progressive patient care hospital may, of course, participate in a home care program organized by another agency.

In 1961, the American Hospital Association developed a set of guiding principles† "to assist hospitals in planning and organizing coordinated home care programs in such a manner that these special services may gain acceptance by community, physicians, and paying agencies."

## ADMINISTRATIVE STRUCTURE

The principles of administration of hospital-based coordinated homecare programs, as developed by the American Hospital Association, emphasize that while daily administration of the program can be carried out by a public health nurse, a social worker or other nonphysician member of the administrative structure, it is essential that a physician direct the program.

A physician can be employed to serve as director on a full-time or part-time basis. In a hospital-based program, medical direction can be provided by a physician serving as chief of the home-care program, in the same manner as chiefs of specialized clinical services of the hospital. The home care department of a hospital should be organized as a service comparable to the outpatient department or other clinical services.

## SELECTION OF PATIENTS

Patients should be admitted to a coordinated home care program only when this kind of care best meets his needs. Skilled medical, nursing, and social evaluation are essential in selecting the patients for this program. Services should be available to private patients as well as to those whose care is paid for by welfare or other sources. The home care program ideally should be equipped to serve all disease categories—including patients already in the community as well as those to be released from the hospital.

The American Hospital Association principles suggested the following minimum rules for admission policies:

To be eligible for acceptance by a coordinated home care program a patient should have the following:

a. A home situation in which primary care can be given by a member of the family or by someone occupying a similar position;

b. The type of illness or disability that does *not* require the intensity or immediacy of services provided in a hospital; and

c. A need for the kinds of supportive services available through the home care program.

## EVALUATION AND COORDINATION

Conferences, records, and reports are essential for the coordination of services. The team evaluation conference seeks to determine a plan for treatment by evaluating the medical, nursing, and social information. Such conferences should be held at regular intervals. When the attending physician is not present, the conference report should be sent to him within 24 hours. The physician's approval should be obtained before conference recommendations are implemented.

*Summary Report of the First Regional Workshop on Home Care (under identical sponsorship) for participants of the States of Illinois, Indiana, Michigan, Ohio, Wisconsin, Chicago, May 24–26, 1961. Chicago, American Medical Association, 1961.

†"Principles of Administration of Hospital-Based Coordinated Home Care Programs," American Hospital Association, Chicago, Ill., 1961.

An interagency referral form is a helpful device in maintaining continuity of care when the patient is discharged to another agency from the home care program.

## SERVICES REQUIRED

The minimum kinds of services are medical, nursing, social, and related services. The number and variety provided by the home care program vary from community to community and from time to time. The services provided for the individual patient also vary, depending upon individual needs.

All the diagnostic and treatment services of the hospital should be available to the ambulatory patient who is able to come to the hospital outpatient department or the private physician's office. For those who are bedfast or otherwise unable to come to the hospital, certain organized services of the hospital are brought to the home.

*Medical services.*—Direct medical services to patients in the home are provided by the attending physicians. In some programs direct services are provided by resident physicians and senior medical students under supervision. Such services can include diagnostic medical examinations and uncomplicated diagnostic and therapeutic procedures. Specimens for diagnostic tests can be collected in the home. If portable equipment is available, procedures such as electrocardiograms and X-rays can be carried out in the home.* Medical consultation is often made available through the hospital of which the home care program is a part.

*Nursing services.*—Nursing care is usually a contracted service from a community agency such as the Visiting Nurse Association. Where no agency exists, nursing service may be provided by the hospital. Such care may include dressings, injections, irrigations, bed baths, and health instruction to the patient and members of the family who are caring for the patient.

The nurse in the home has the opportunity to help the patient and his family plan a health program for prevention as well as maintenance and recovery.

*Social services.*—Social services to home care patients and their families may be provided by the social service staff of the hospital or of a community social service agency. The amount and kinds of services would be governed by the program of the agency and by the needs of the patient and his family. Community agency services would be coordinated with those provided through the hospital as part of the home care program.

*Supportive services.*—For some patients, only the basic medical, nursing, and social services are required. However, other patients may also need one or more of a broad range of supportive services. Such supportive services may include: homemaker service; nutritional guidance or food service; physical therapy; occupational therapy; speech therapy; dental care; equipment and appliance loan service; pharmaceutical service; hospital laboratory and X-ray service; availability of hospital inpatient service; foster home placement; and vocational education.

Hospitals can play an important role in extending the hospital food service into the community by means of portable food service to the homebound patients. In order to carry out such a program, it may be necessary for the hospital to increase its dietary facilities for preparing food and for storing portable equipment.

## DESIGN AND EQUIPMENT

Facilities for the home care program will depend on the extent of the services offered and whether the hospital provides the home-visiting service or depends on outside agencies.

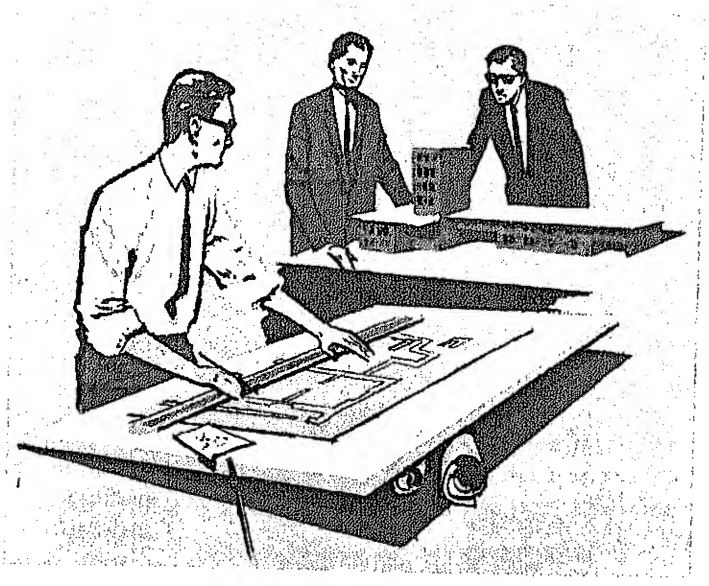
An office for the coordinator of the home care program must be provided, together with secretarial facilities. Equipment will consist of the usual desks, chairs, and filing cabinets, as required. In addition, a private conference room should be available for use of the home care program staff. The size will vary with the number of personnel involved.

Desk space for the home visiting staff should be furnished only if the hospital provides this service.

Generally the equipment used in the home care program will be drawn from the various departments involved, such as physical therapy and occupational therapy, and no special storage facilities are required. However, if equipment is to be rented to patients, a separate area for storage and checking of this equipment should be provided. Some of the items which may be loaned to patients in their homes include: hospital beds, mattresses, safety rails, trapezes, Balkan frames, wheelchairs, commodes, suction apparatus, catheters, sandbags, walkers, crutches, walking mat, and rubber rings.

*M. Cherkasky, The Montefiore Hospital Home Care Program, *American Journal of Public Health*, 33: 163–166. February 1949.

# *Part VI*
# *Hospital Design*



The impact of the progressive patient care concept on the design of the general hospital is felt mainly in the arrangement and location of patient care units.

The perspective sketch (fig. 3) and diagrammatic plans presented in this section indicate a way of arranging and relating departments in a hospital of approximately 280 beds so as to permit the grouping of functions for effective control, and the distribution of the many and diverse items and services required in a hospital.

## ARCHITECTURAL PLANS

The following floors are shown in figures 4–10:

*Ground floor.*—Supporting services are concentrated here so that all materials entering and being distributed throughout the hospital can be received, processed, and controlled in a Central Service Department, under one responsibility.

*First floor.*—Adjunct facilities such as X-ray, laboratory, and physical therapy, as well as administration, are located here to make these facilities convenient to the emergency and outpatient departments. Surgery is placed here so that X-ray and laboratory are close by. The supply room and soiled-holding room shown in the diagram service all departments on the floor.

*Second floor.*—The dietary department is placed here, thus making it possible to locate food tray conveyors close to supply conveyors on the inpatient floors. The self-care unit is also located here so that patients can walk to meals and be convenient by elevator or stairs to the entrance, admitting office, and the adjunct facilities on the first floor.

*Third floor.*—The delivery suite and the maternity unit could be on any floor. They are arranged so that patient and visitor traffic are separated. Three double rooms on this floor may be used either by maternity or by the adjacent intermediate care unit. The doors at each end of this block of rooms permit them to be cut off from either unit.

The supply room and soiled-holding room serve the entire floor. Food tray service for the floor is handled by the mechanical conveyors and dumbwaiter in the central nourishment room.

*Fourth floor.*—The three patient care units on the floor, long-term and two intermediate care, are served by the centrally located supply room and soil-holding room. Food tray service for all units is handled in the central nourishment room.

*Fifth floor.*—Intensive and intermediate care units are related so that either can overflow into the flexible zone between the two units when patient census requires.

The entire floor is serviced by the centrally located supply, soiled-holding, and nourishment rooms.

*Sixth floor.*—In the psychiatric unit, patient-staff and visitor elevator traffic is separated. The addition

of other patient care units to this floor would not interfere with this separation.

Supplies for this unit will be minimal and will be sent from central service on carts. Special medications may be sent from the pharmacy by pneumatic tube.

A mobile cafeteria cart, brought by elevator from the main kitchen to the dining room on the unit, is used for the food service.

## VENTILATION AND AIR CONDITIONING

*Interior rooms.*—Interior rooms will be served by a conventional duct system, with recirculation of air of all areas with the exception of toilet, soiled-holding, and treatment rooms. The following ventilation rates are recommended:

*Treatment room, soiled-holding room, and dayroom:* The equivalent of four room-volumes of air per hour with a negative air pressure relative to the air pressure of the corridor.

*Conference room and doctors' charting room:* The equivalent of three room-volumes of air per hour with a negative air pressure relative to the air pressure of the corridor.

*Corridors:* The equivalent of two room-volumes of air per hour with a positive air pressure relative to the air pressure of adjoining rooms of the central core.

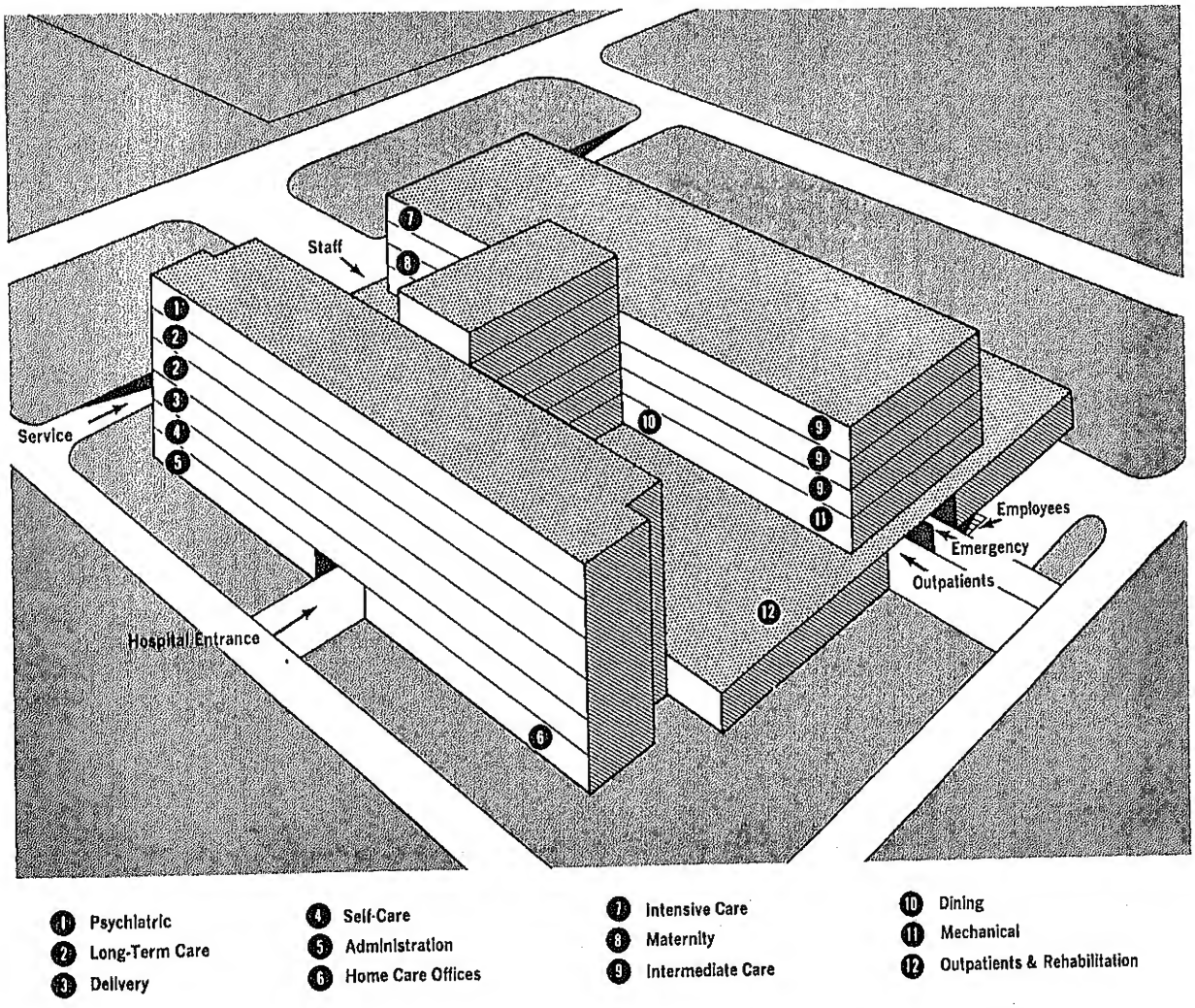



*Figure 3.* **Perspective sketch of a 280-bed progressive patient care hospital.**

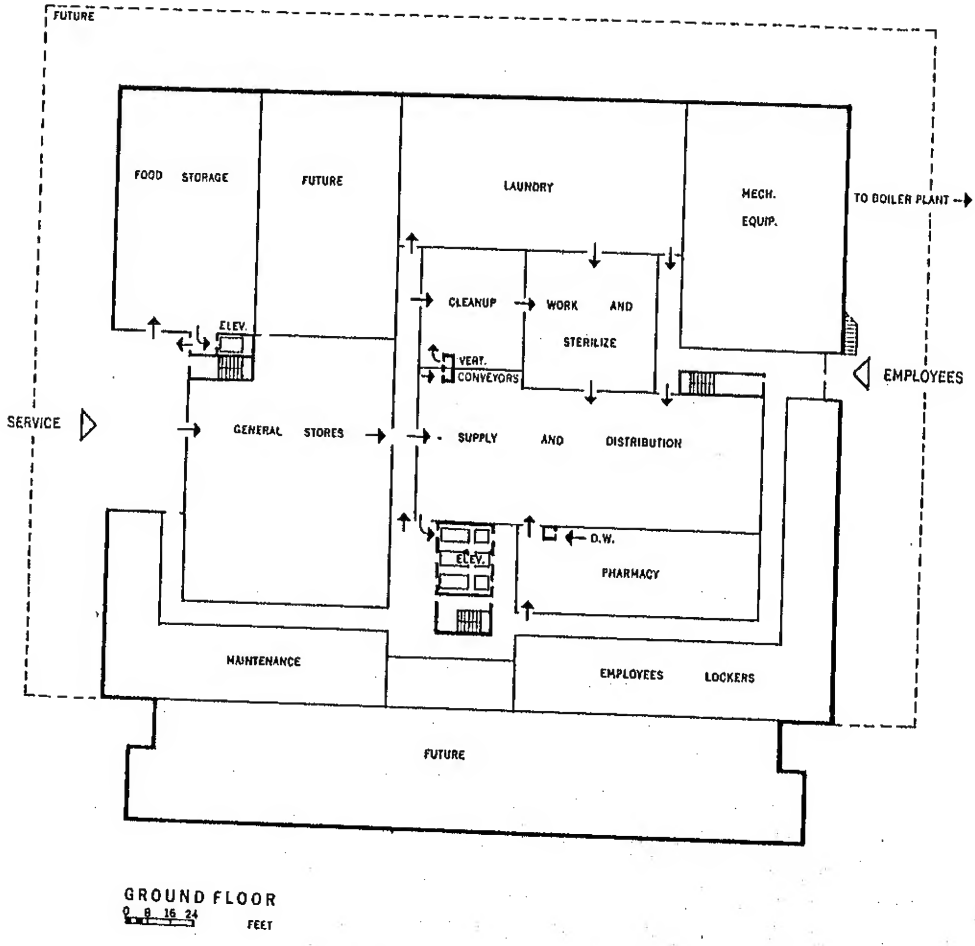



*Figure 4.* Plan for the ground floor where supporting services are concentrated.

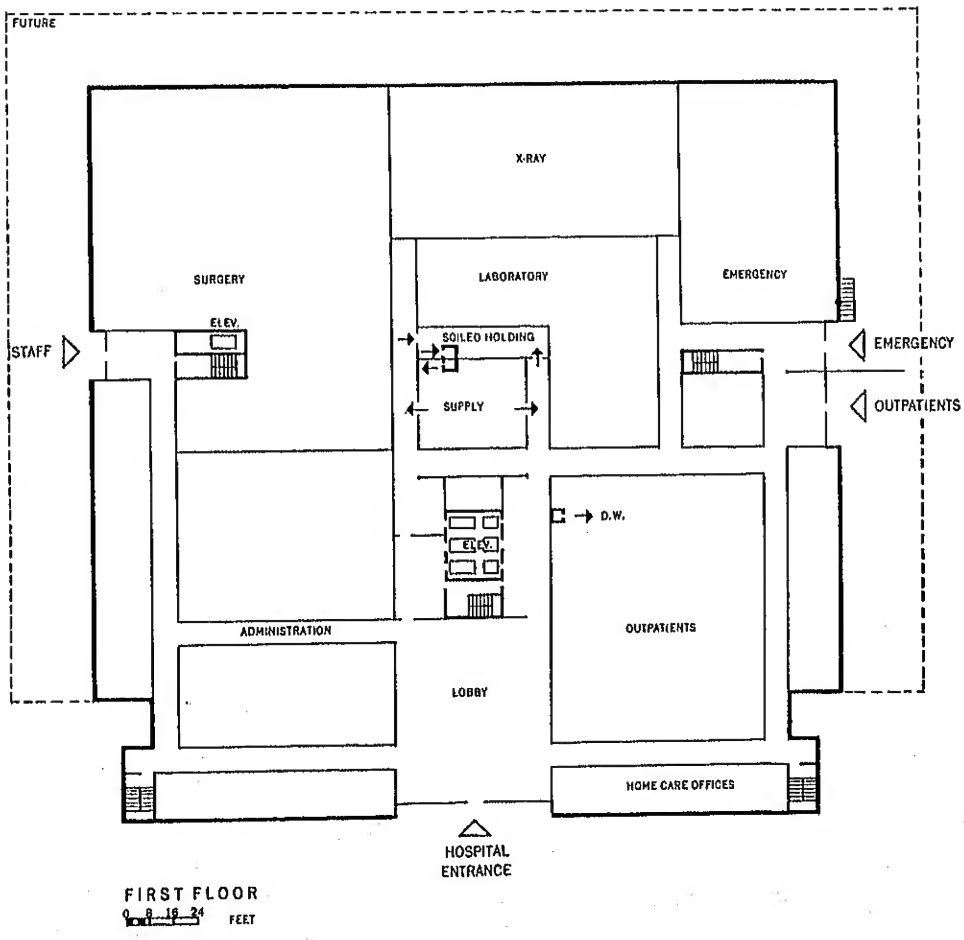



*Figure 5.* Plan for the first floor which includes administration, emergency, and outpatient departments, and surgery, X-ray, laboratory, and physical therapy facilities.

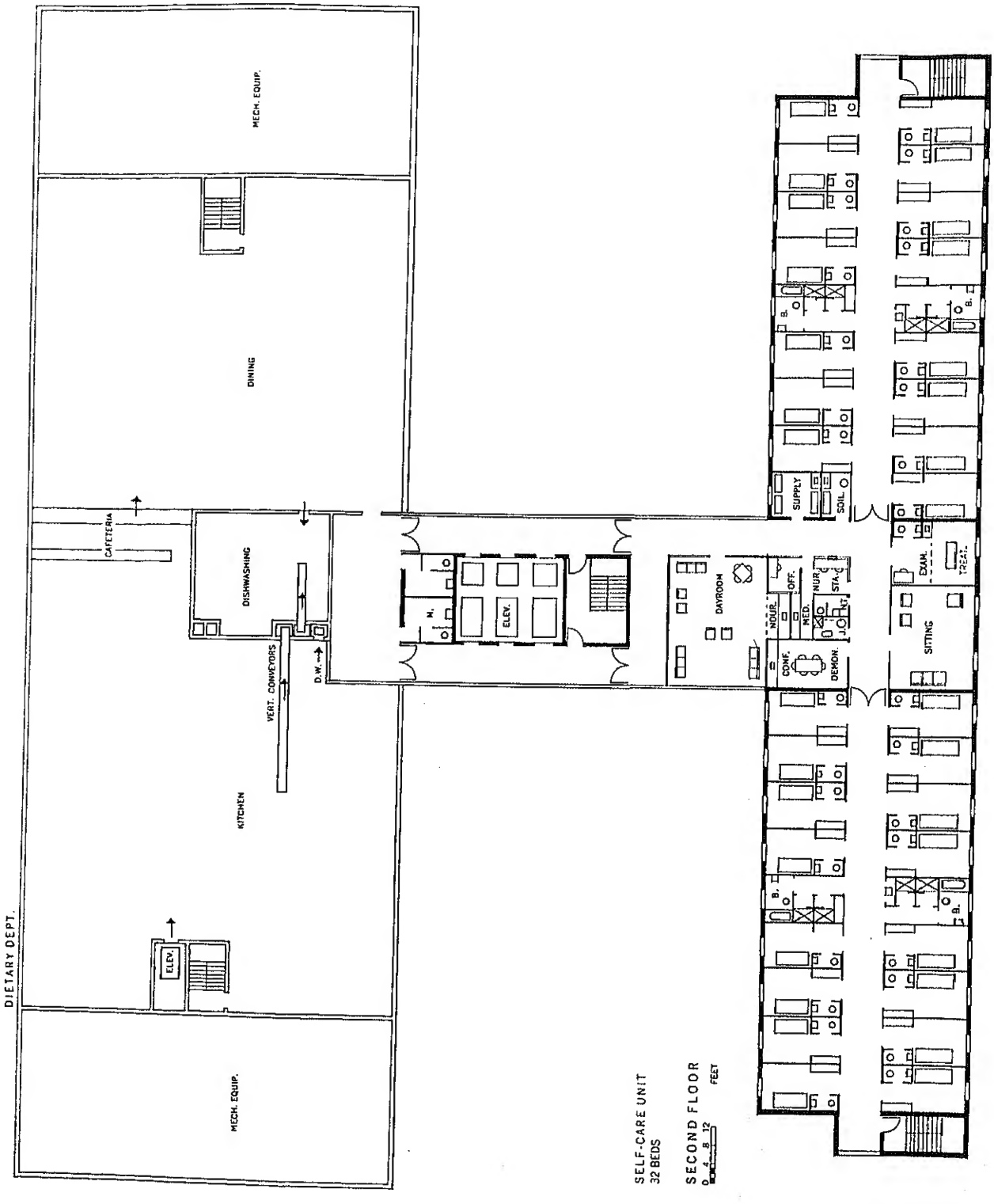



*Figure 6.* Plan for the second floor where the self-care unit and dietary department are located.

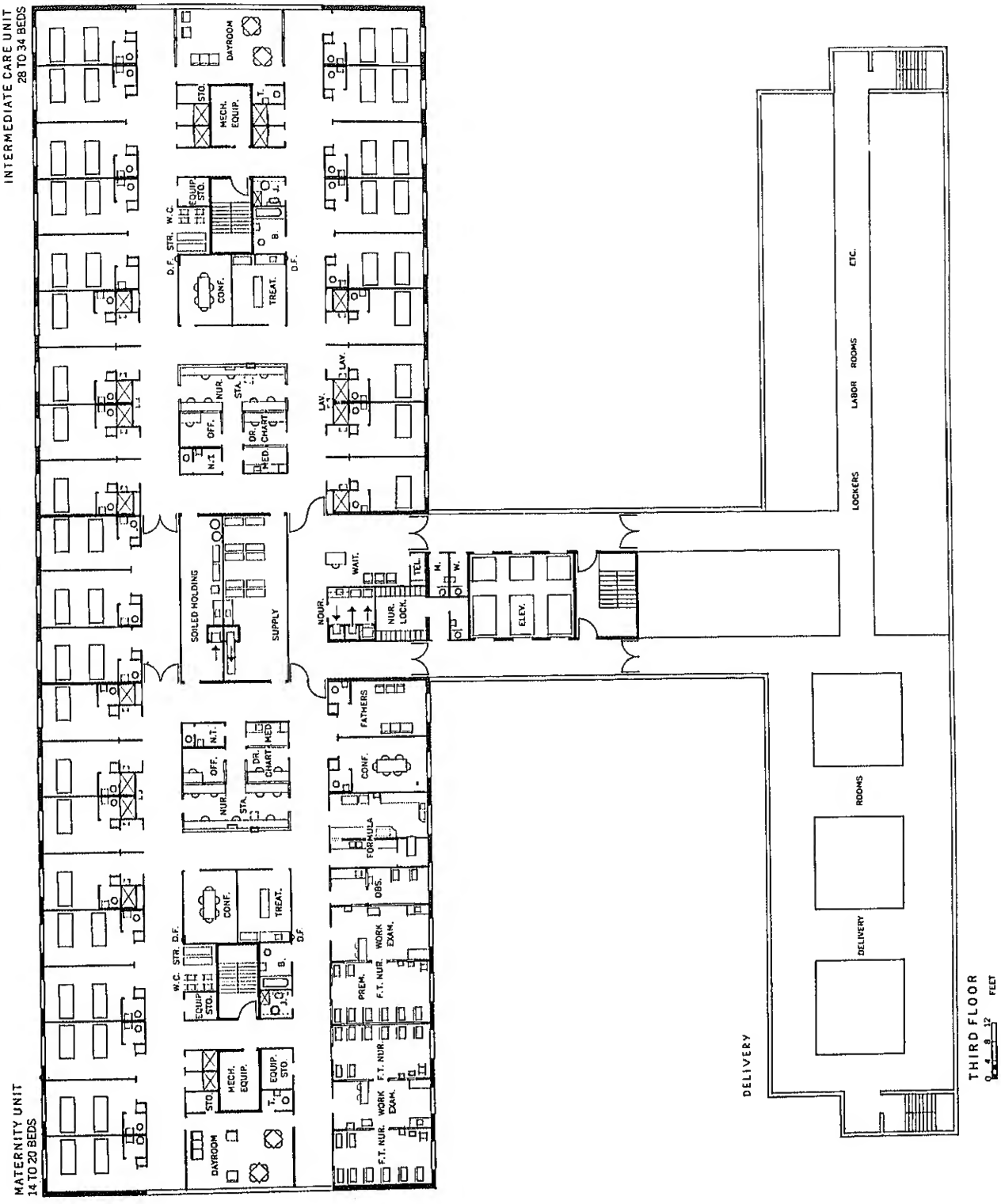



*Figure 7.* Plan for the third floor which includes the delivery suite, maternity unit, and intermediate care unit.

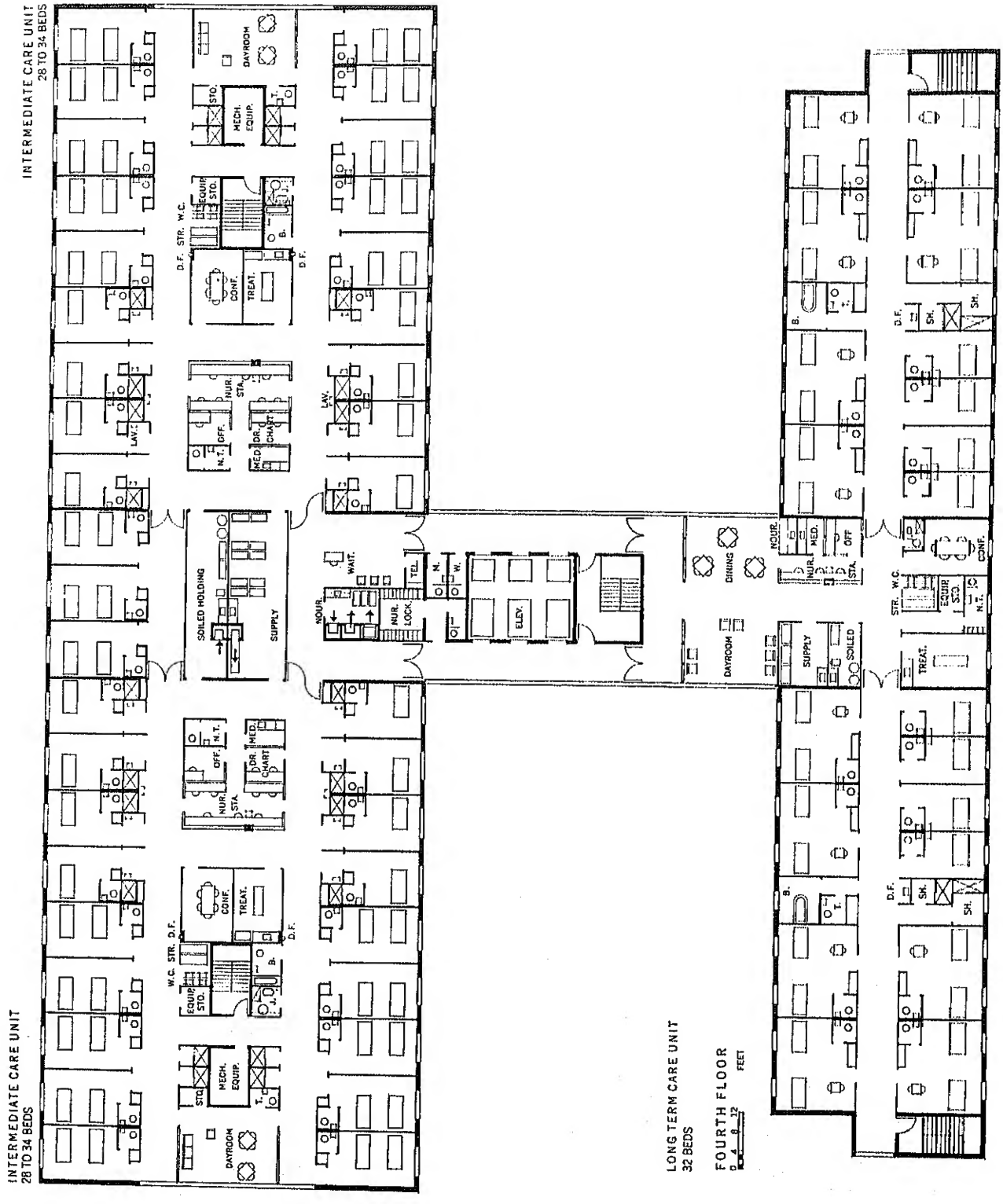



*Figure 8.* Plan for the fourth floor which includes units for long-term and intermediate care patients.

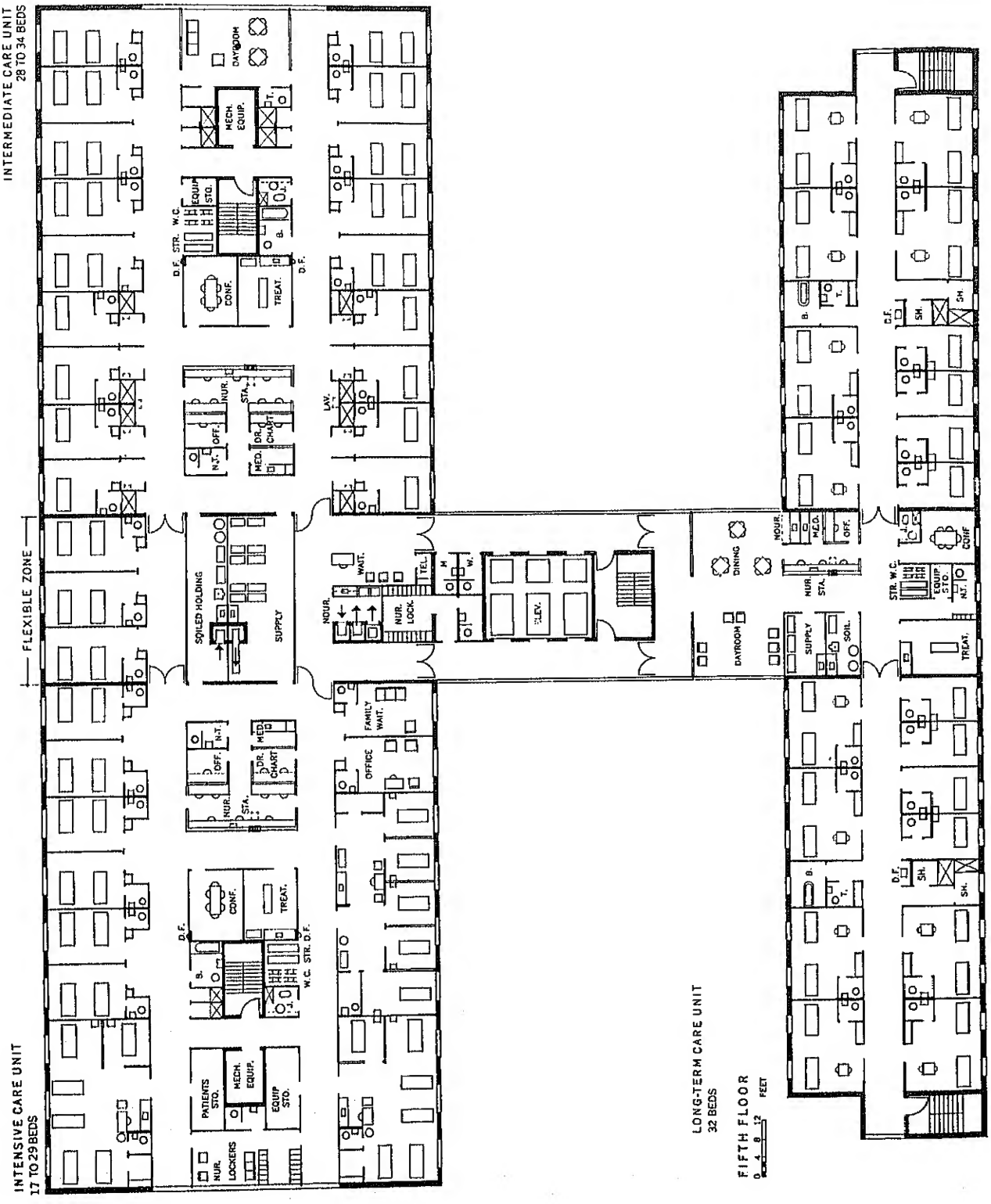



*Figure 9.* Plan for the fifth floor where the intensive care unit is located along with intermediate and long-term care units.

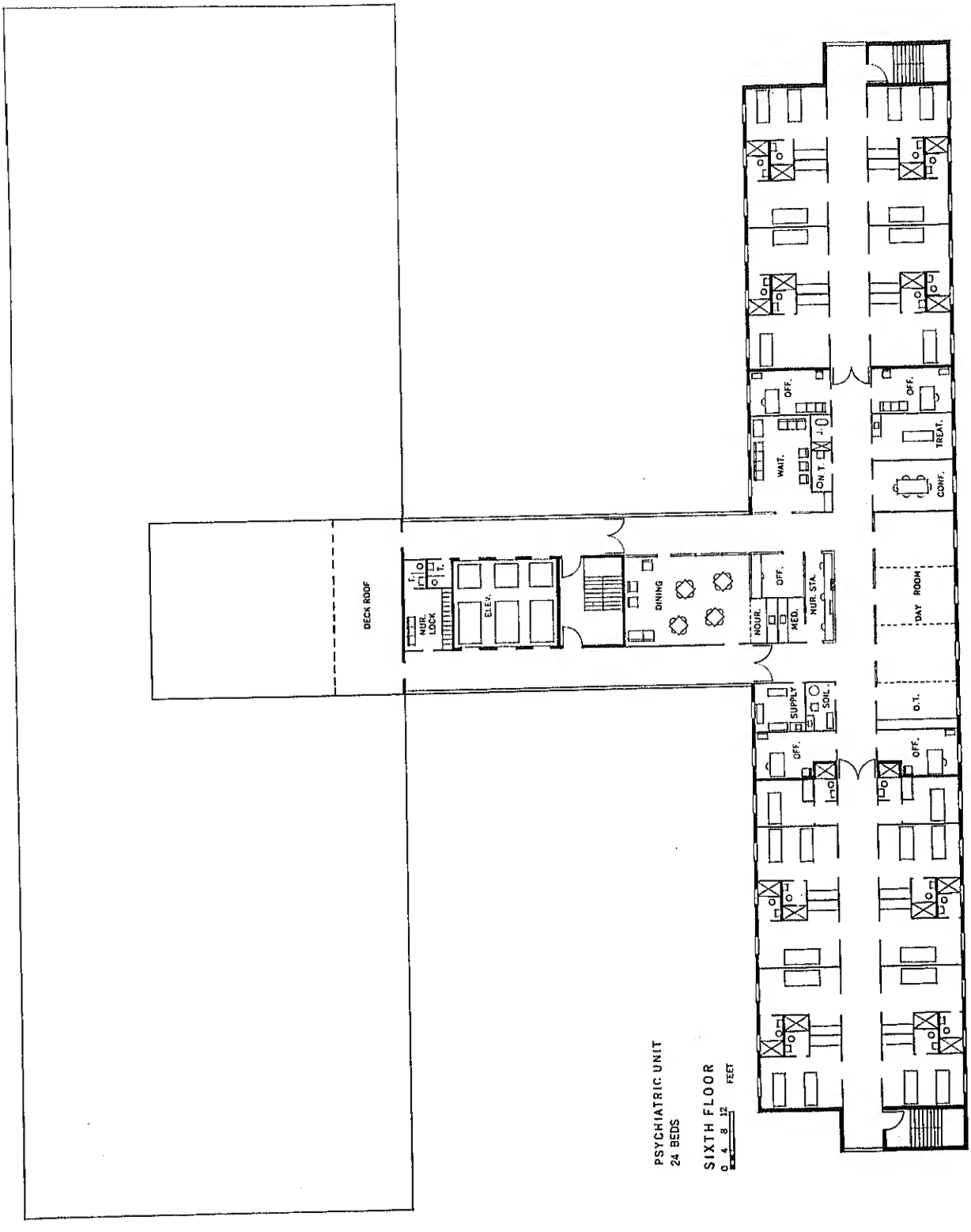



*Figure 10.* Plan for the sixth floor where the psychiatric unit is located.

# APPENDIX A

## The Equipment

Just as progressive patient care has resulted in innovations in hospital administration and design, so has its impact also been felt from the standpoint of arrangement and distribution of equipment, supplies, and drugs. It is implicit in the concept that equipment and supplies be placed as convenient as possible to the units having special requirements.

The unit most vitally affected is intensive care. Here it is necessary to place lifesaving equipment, supplies, and drugs required by the critically and seriously ill patient. Moreover, the supply of all items must be maintained at a specified level. To accomplish this means that an inventory must be made daily.

The distribution of equipment, supplies, and drugs in the other areas of the progressive patient care hospital does not materially differ from the pattern in the traditional hospital, except that the self-care unit requires considerably fewer items.

The equipment lists presented in chapter III for each of the elements are, in large measure, based on the schematic plans which appear in part VI of that chapter. Discretion must be exercised in the use of the lists since variations in requirements may arise as local programs and plans differ from the guide plan presented.

## EQUIPMENT CLASSIFICATION

The term "equipment" means items necessary for the functioning of the facility, exclusive of strictly supply items. Items of equipment listed in chapter III are classified in three groups, the basis of classification being the usual methods of purchase and suggested accounting practices in regard to depreciation.

*Group I equipment* is that which is usually included in the construction contract. Examples are cabinets, counters, sinks, and other "built-in" equipment.

*Group II equipment* is depreciable equipment of 5 years' life or more not normally purchased through the construction contract, such as large items of furniture and equipment having a reasonably fixed location in the building but capable of being moved. Examples are bedroom furniture, wheelchairs, and examination and treatment tables.

*Group III equipment* includes items which have a life of less than 5 years, normally purchased through other than construction contracts. These are small items of low cost and suited to storeroom control. Examples are bedpans, surgical instruments, and rubber gloves. These items, although required by all units, are noted only in the intensive care equipment list.

For a complete listing of suggested equipment, see "Hospital Equipment Planning Guide," Public Health Service Publication No. 822. Free single copies are available from the Public Health Service, Department of Health, Education, and Welfare, Washington 25, D.C.

---

**Note**

**A blank under the column "suggested quantity" in the equipment lists indicates that the item is required but the quantity is not determined. The quantity is determined upon correlation of schematic plans.**

**The dash (—) indicates that the item is not applicable to the particular area.**

---

# Selected Bibliography

## General


Abdellah, Faye G. "How We Look at Ourselves." *Nursing Outlook*, 7: 273–275. May 1959.

Abdellah, Faye G., and Strachan, E. Josephine. "Progressive Patient Care." *The American Journal of Nursing*. 59: 649–655. May 1959.

Abdellah, Faye G. "Progressive Patient Care—A Challenge for Nursing." *Military Medicine*, 125. May 1960. (Also published in *Hospital Management*, 89: 102–106, 135–137. June 1960.)

Abdellah, Faye G., R.N., Ed. D.; Meyer, Burton, Ph. D.; and Roberts, Helen, R.N. "Nursing Patterns Vary in Progressive Care." *The Modern Hospital*, 95: 85–91. August 1960.

Agnew, G. Harvey, M.D. "Progressive Patient Care." *Canadian Hospital*, 36:39–40, 76–77. August 1959.

Berke, Mark. "Implications of Progressive Patient Care in Regional Planning." *Hospital Forum*, 3: 21, 36. December 1960.

Bradley, L. O., M.D. "P.P.C. Decentralized for Continuity." *Canadian Hospital*, 38: 34–36. February 1961.

Claussen, E. "Categorization of Patients According to Nursing Care Needs." *Military Medicine*, 116: 209–214. March 1955.

Connor, Robert J., et al. "Effective Use of Nursing Resources: A Research Report." *Hospitals*, Journal of American Hospital Association, 35: 30–39. May 1, 1961.

Croatman, Wallace. "Progressive Hospital Care: What It Means for You." *Medical Economics*, 36: 74–80, 200–222. December 1959.

Davis, Ellen L. "Progressive Patient Care. Patient Care Plan Moves Out of Experimental Stage as Manchester Memorial Hospital Adds $2.5 Million Wing." Part I. *Hospital Topics*, 38: 19–25. March 1960.

Ph. D.
Care."
8–454.

Donovan, Anne Claire, and Meyer, Burton, Ph. D. "How to Plan Progressive Patient Food Service." *The Modern Hospital*, 95: 116–120. December 1960.

Earle, Howard. "How Progressive Patient Care Cuts Hospital Costs." *Today's Health*, 39: 56–59, 81–83. May 1961.

Erwin, Julia. "Adapting Dietary Facilities to Progressive Patient Care." *Hospitals*, Journal of American Hospital Association, 35: 77–80. July 16, 1961.

"Experiment at Manchester." *The American Journal of Nursing*, 58: 815. June 1958.

Felton, Bernard L. "What Administrators Want To Know About Progressive Patient Care." *The Modern Hospital*, 93: 71–72. August 1959.

Ford, Loretta C. "The 5 Elements of Progressive Patient Care." *Nursing Outlook*, 8: 436–439. August 1960.

Garwood, H. F. "Why Queensway Is Adopting Progressive Patient Care." *Canadian Hospital*, 37: 58–59, 108–109. September 1960.

Golin, M. "At Last—A Hospital To Fit Doctor-Patient Needs." *Journal of the American Medical Association*, 166: 2180–2183. April 1958.

Haldeman, Jack C., M.D., and Abdellah, Faye G. "Concepts of Progressive Patient Care." *Hospitals*, 33: 41–46. June 1959.

Haldeman, Jack C., M.D. "Progressive Patient Care and the Public Health Worker." *Oklahoma Journal of Public Health*, 2: 3–7. April 1959.

Haldeman, Jack C., M.D. "Progressive Patient Care—A Challenge to Hospitals and Health Agencies." *Public Health Reports*, 74: 5, 405–408. May 1959.

Hayden, A. C. "Progressive Patient Care Reflected in the Records." *The Modern Hospital*, 92: 85–88. January 1959.

Heffernon, G. A. "More Nurses Where They Are Most Needed." *Hospitals*, 28: 101–102. September 1954.

Hilliard, O. S. "Progressive Patient Care Makes Sense." *Southern Hospitals*, 27: 70. March 1959.

Hoge, V. M. "Hospital Facilities Should Fit the Patient." *The Modern Hospital*, 88: 51–54. March 1957.

"How To Determine Costs of Progressive Care—A Modern Hospital Round Table." *The Modern Hospital*, 93: 67–70, 134. August 1959.

Hueston, Ralph M. "Progressive Patient Care—Experience of Chicago Wesley Memorial Hospital." *Hospital Management*, 88: 3, 101–102. September 1959.

Jurgens, W., R.N. "Progressive Patient Care May Mean a Big Change Ahead in Your Job." *RN*, 21: 40–42, 76–84. September 1958.

Lake, Alice. "The Patient Gets A Break." *Saturday Evening Post*, January 1960. pp. 18–19, 44, 48.

Lewis, H. Bernice. "The Patient and Progressive Care." *Canadian Hospitals*, 38: 32–33, 86. February 1961.

Lockward, H. J., M.D.; Giddings, Lane, M.D.; and Thoms, Edward J. "Progressive Patient Care—A Preliminary Report." *The Journal of The American Medical Association*, 172: 132–137. January 9, 1960.

Lonnie, Louis J. "Progressive Patient Care." *Hospital Management*, 90: 66–71. November 1960.

"Patients Vote for Progressive Patient Care." *The Modern Hospital*, 95: 75–79. July 1960.

Patterson, Hope, R.N. "How Is Progressive Patient Care Doing?" *RN*, 23: 62–68, 100, 102. April 1960.

Pellegrino, E. D. "The Nurse Must Know—The Nurse Must Speak." *The American Journal of Nursing*, 60: 360–363. March 1960.

"Progress in Hospital Care." Editorial, *Journal of the American Medical Association*, 167: 582–583. May 1958.

"Progressive Care Gets Into the Plan." *The Modern Hospital*, 92: 75–80. March 1959.

Regan, William A. "Legal Pitfalls in Progressive Patient Care." *RN*, 33–37, 87. May 1960.

"Report on Progressive Care—It Works." *The Modern Hospital*, 90: 73–77. May 1958.

"Symposium on Progressive Patient Care." *Hospitals*, Journal of American Hospital Association, 33: 42–56. January 1959.

Thoms, Edward J. "Progressive Patient Care." Part I, *Nursing World*, 134: 10–13. February 1960.

Thoms, Edward J. "Progressive Patient Care." Part II, *Nursing World*, 134: 11–12, 32. March 1960.

## Intensive Care

Beardsley, J. M., and Carvisiglia, F. "A Special Care Ward for Surgical Patients." *Nursing World*, 131: 11–13. March 1957.

Beardsley, J. M., et al. "Centralized Treatment for Seriously Ill Surgical Patients." *Journal of the American Medical Association*, 162: 544–547. October 1956.

Bell, E. A. "Special Nursing Unit Relieves the Strain." *The Modern Hospital*, 83: 74–75. November 1954.

Brigh, Sister Mary, O.S.F., and Amadeus, Sister M., O.S.F. "Intensive Care: Effective Care." *Hospital Progress*, 39: 64–66, 131–132. December 1958.

Cadmus, R. "Special Care for the Critical Case." *Hospitals*, 28: 65–66. September 1954.

Colbrath, L. "Nursing Service Unlimited." *Nursing Outlook*, 4: 670–671. December 1956.

Craig, James S. "A Study on the Intensive Care Unit in General Hospitals." *Canadian Hospitals*, 39: 42–45. January 1962.

Dornette, William H. L., M.D., and Durbin, Richard L., M.B.A. "Design and Construction of an Intensive Care Facility." (Part I.) *Hospital Management*, 91: 35–39. February 1961.

Dornette, William H. L., M.D., and Durbin, Richard L., M.B.A. "Design and Construction of an Intensive Care Facility." (Part II.) *Hospital Management*, 91: 51–53. March 1961.

Hardaway, R. M. "Special-Care Ward for Critically Ill Surgical and Postoperative Patients." *U.S. Armed Forces Medical Journal*, 8: 1358–1260. September 1957.

Horgan, Patricia D., R.N. "Rx for the Critically Ill Child: Intensive Care." *RN*, 23: 44–50. May 1960.

Howell, J. Douglas. "The Intensive Care Unit: from the Business Office Viewpoint." *Hospital Forum*, 3: 33–34. January 1961.

"Intensive Care Units Help Give Doctors Peace of Mind, Surgeons Told at Meeting." *The Modern Hospital*, 96: 88, 183. April 1961.

Lamb, R. J. "How To Plan Intensive Care." *The Modern Hospital*, 91: 51–55. July 1958.

Last, T. "Concentrating on the Critically Ill." *The Modern Hospital*, 86: 69–71. June 1956.

Lyle, B. O. "Special Care Pavilion." *Southern Hospitals*, 26: 26–28. May 1958.

Magee, Richard B., and Skinner, Richard W. "The Special Care Unit in the Altoona Hospital." *Pennsylvania Medical Journal*, 61: 497–500. April 1958.

McCain, R. Faye, R.N., M.A. "The Intensive Nursing Care Unit." *Nursing World*, 133: 30–31. May 1959.

Miller, J. D., Jr. "The Critical Care Unit in a 134-Bed Hospital." *Hospitals*, 30: 46–47, 96. October 1956.

Mosenthal, W. T., and Boyd, D. D. "Special Unit Saves Lives, Nurses and Money." *The Modern Hospital*, 89: 83–86. December 1957.

Patricia, Sister Ellen, S.C. "Intensive Care Unit Wins Patient, Personnel Approval." *Hospital Progress*, 40: 71–72. October 1959.

Sister Philias, F.C.S.P. "An Intensive Look at the Intensive Care Unit from the Nursing Service Viewpoint." *Hospital Forum*, 3: 31–34. January 1961.

Regan, William A. "A Legal Look at Progressive Patient Care." Part II. *Hospital Progress*, 40: 80–81. June 1959.

Robinson, Edward P. "Determining Nursing Staffing Patterns for an Intensive Care Unit." Part I. *Hospital Topics*, 38: 45–58. October 1960.

Robinson, Edward P. "Determing Nursing Staffing Patterns for an Intensive Care Unit." Part II, *Hospital Topics*, 38: 30–34. November 1960.

Robinson, Edward P. "Determining Nursing Staffing Patterns for an Intensive Care Unit." *Hospital Topics*, 38: 47–50, 55–56, 64. December 1960.

Sadove, M. S., et al. "The Recovery Room Expands Its Service." *The Modern Hospital*, 83: 65–70. November 1954.

Salisbury, Peter F., M.D., Ph.D. "An Intensive Treatment Center Meets Special Needs." *Hospital Progress*, 40: 5, 92–94. May 1959.

Stout, William J., and Yeates, Zeno L. "Intensive Care Unit for a 99-Bed Hospital." *Southern Hospitals*, 28: 33–34. April 1960.

Sturdavant, Madelyne. "Intensive Nursing Service and Rectangular Units Compared." *Hospitals*, Journal of American Hospital Association, 34: 47–48, 71–78. July 16, 1960.

Thompson, J. D. "'Short Stay' and 'Long Stay': Study of Two Recovery Rooms Offers Clues to Intensive Care Unit Design." *Hospitals*, Journal of American Hospital Association, 32: 35, 51–52, 56–59. November 1958.

Wagner, R. "How Does the Intensive Care Unit Affect Nursing Morale and Utilization?" *Nursing Outlook*, 6: 286–288. May 1958.

Williams, L. W. "An Intensive Nursing Care Unit." Part I. *Hospital Management*, 86: 106. October 1958.

Williams, L. W. "An Intensive Nursing Care Unit." Part II. *Hospital Management*, 86: 94–95, 123. November 1958.

W. K. Kellogg Foundation, "The Planning and Operation of an Intensive Care Unit." The Foundation, Battle Creek, Mich. Brochure. September 1961. 46 pp.

Woolever, G. M. "An Intensive Care Unit." *Nursing Outlook*, 6: 690–691. December 1958.

Yaw, Ronald. "Intensive Care: A Hospital State of Mind." *Hospitals*, Journal of American Hospital Association, 35: 65–66. February 16, 1961.

## Self-Care

Barton, J. "Round the Clock Nursing or Self Service." *The Modern Hospital*, 88: 51–56. June 1957.

Davis, Ellen L. "Self-Service Units Rate High in Progressive Patient Care Approval at Manchester Memorial Hospital." Part II. *Hospital Topics*, 38: 39–44. April 1960.

Davis, Ellen L. "Albert Einstein Medical Center Plans Extension of PPC to Self-Service Units Staffed Partly by Medical Students." *Hospital Topics*, 38: 30–34, 37–38. May 1960.

Regan, William A. "A Legal Look at Progressive Patient Care." Part III—Minimum Care Units. *Hospital Progress*, 40: 90–91, 124. July 1959.

Shortcliffe, E. C., and Brackett, M. E. "A 'Minimal Care' Unit for the Short-Term Patient." *Hospitals*, 29: 77–79. November 1955.

Walker, Robert. "A Hospital Hotel. N.C. Baptist Hospital's $7-a-Day Minimal Care Unit." *Southern Hospitals*, 28: 31–32. January 1960.

Walker, Robert. "Reducing the Cost of Hospital Care—N.C. Baptist Hospital's New Facility." *Southern Hospitals*, 29: 25–28. March 1961.

## Home Care


American Medical Association Council on Medical Service. "Organized Home Care Programs in the United States." *Journal of the American Medical Association*, 164: 298–305. May 18, 1957.

American Hospital Association. "Principles of Administration of Hospital-Based Coordinated Home Care Programs." Chicago, *The Association*. 1961. 10 pp.

American Hospital Association. "Proceedings of Workshop on Home Care Services." Conducted under joint sponsorship of the American Hospital Association, American Medical Association, Blue Cross Commission, Blue Shield Medical Care Plans, and Public Health Service, Chicago. Apr. 20–22, 1960. 96 pp.

Bluestone, E. M. "Fear In Hospital Practice: Some Advantages of Home Care." *Lancet*. London. 1: 1083–1084. May 24, 1958.

Bluestone, E. M. "Home Care and the Practitioner." *Postgraduate Medicine*, 24: 138–142. August 1958.

Bluestone, E. M. "The Principles and Practices of Home Care." *Journal of the American Medical Association*, 155: 1379–1382. Aug. 14, 1954.

Cherkasky, Martin; Rossman, Isadore; and Rogatz, Peter. "Guide to Organized Home Care." Chicago, Hospital Research and Educational Trust. 1961. 35 pp.

Commission on Chronic Illness. "Chronic Illness in the United States." V. II. Care of the Long-Term Patient. Cambridge, Harvard University Press. 1956. 606 pp.

Cowdry, E. V. "The Care of the Geriatric Patient." St. Louis, Mosby. 1958. 438 pp.

Feigenbaum, A., and Kutner, B. "Hospital-Based Prehospitalization Home Care." *Journal of Chronic Diseases*, 9: 405–409. April 1959.

Follman, J. F., Jr. "Health Insurance and Nursing and Home Care, a Study." New York, Health Insurance Association of America. 1959. 78 pp.

Gifford, James P. "This Home Care Program Pays Doctor's Full Fees." *Medical Economics*, 37. June 20, 1960.

Gogan, I., M.D. "Is a Home Care Plan Practical?" *The Canadian Hospital*, 35: 43–44, 64. July 1958.

Goldmann, Franz, and Fraenkel, Marta. "Patients on Home Care: Their Characteristics and Experience." *Journal of Chronic Diseases*, 11: 77–87. January 1960.

"Home Care Programs." *Journal of the American Medical Association*, 166: 1868. April 1958.

"Home Care under Hospital Auspices—A Constructive Service for the 'Chronic' Patient." *What's News*. 210: 20–21 Abbott Laboratories, Chicago. Late Winter, 1959.

Hospital Council of Greater New York. "Organized Home Medical Care in New York City." Cambridge, Harvard University Press. 1956. 538 pp.

Littauer, David; Flance, I. Jerome; and Wessen, Albert F. "Home Care." Hospital Monograph Series No. 9. Chicago, *American Hospital Association*, 1961. 110 pp.

Littauer, D., M.D.; Flance, I. J., M.D.; and Wessen, A. F., Ph. D. "Home Care—Summary of a Comprehensive Study." *Hospitals*, 35: 41–43. January 1961.

Markley, H. E., M.D., and Brauntuch, J. "How Home Care Works in a City of 48,000." *Hospitals*, 32: 35–38. June 1958.

Munter, Edgar J., and Berke, Mark. "The Care of the Long-Term Patient." *Journal of Chronic Diseases*, 7: 144–177. February 1958.

National Health Council. "Guides to Action on Chronic Illness." New York, *The Council*. 1956. pp. 23–33.

Perrow, Charles. "Research in a Home Care Program." *American Journal of Public Health*, 49: 34–44. January 1959.

Public Health Service. "A Study of Selected Home Care Programs." A joint project of the Public Health Service and the Commission on Chronic Illness. Public Health Service Publication No. 447 or Public Health Service Monograph No. 35. Washington, D.C., Government Printing Office. 1955. 127 pp.

Rogatz, P., M.D., and Crocetti, G. M., M.A. "Home Care Programs—Their Impact on the Hospital's Role in Medical Care." *American Journal of Public Health*, 48: 1125–1133. September 1958.

Silver, G. A., M.D. "Social Medicine at the Montefiore Hospital—A Practical Approach to Community Health Problems." *American Journal of Public Health*, 48: 724–731. June 1958.




U.S. GOVERNMENT PRINTING OFFICE: 1962 O—654119

## HILL-BURTON PUBLICATIONS

An annotated bibliography, "Hill-Burton Publications," Public Health Service Publication No. 930-G-3, will be provided upon request. For a free single copy, write to: Division of Hospital and Medical Facilities, Public Health Service, U.S. Department of Health, Education, and Welfare, Washington 25, D.C.

The bibliography presents a brief description of each of the publications from the Hospital and Medical Facilities Series under the Hill-Burton program. They are listed by category as shown below:

A—Regulations

B—Community Planning

C—Organization and Administration

D—Design and Equipment

E—Research and Demonstration

F—Reports and Analyses

G—Bibliography

Publications must be ordered by their complete title and publication number rather than by category.